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MONETARY AND BANKING SYSTEMS

MUHLEMAN

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MONETARY AND BANKING SYSTEMS

A COMPREHENSIVE ACCOUNT OF THE SYSTEMS
OF THE UNITED STATES
WITH

COMPLETE STATISTICAL INFORMATION

AND BRIEF ACCOUNTS OF THE SYSTEMS OF OTHER NATIONS

ALSO

ABSTRACTS OF PLANS FOR CURRENCY REFORM IN THE UNITED STATES

BY MAURICE L. MUHLEMAN, LL. M.,

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Member American Economic Association

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PREFACE

The recent financial crisis has turned public attention actively toward the study of the subject of currency reform, and the need for a compendium, presenting the data requisite to a thorough understanding of the question, has manifested itself. I have therefore completed a revision, begun last summer, of my "Monetary Systems" (published in 1897), and brought the statistics, which proved so useful a decade ago, down to the present time, adding thereto much other valuable material.

The scope of the work has been altered considerably; in 1896-7 the *coinage* question was under discussion and the design then was chiefly to give concise and accurate information bearing specifically upon that phase of our money question. Today we are called upon to consider the *paper currency* feature, and the present volume accordingly deals more extensively with the facts which relate to note-issuing and banking. Our own monetary system. and the volume of our money-supply, are, however, given the fullest treatment; I have in fact accorded them a much larger space in this volume than in the previous one, including data relative to the enormous credit expansion in recent years.

Upon the other hand, much of the needlessly detailed information respecting foreign countries has been eliminated, and particular attention has been given to those features in the monetary systems of other civilized people, likely to prove more useful in the present discussion. The topics of the world's money-supply and international exchanges are included, as also the chapter on international monetary affairs, a brief view of the world's banking power and of its savings banks.

The operations of our banking and sub-treasury systems, and of the New York Stock Exchange, and the question of bank reserves, are new features of interest. The Panic of 1907 and its influence upon the financial conditions abroad, receive special attention.

As before, the many plans proposed to remedy the defects in our system are presented in a concise manner, and brought out more definitely by contrast with the systems of other countries.

There has been added a presentation of the case for credit bank-notes and a Central Bank, the introduction of both of which, in the United States, I have advocated since 1900; and the data, while not originally collected for that purpose, appear to bear out the contention that these are the essential lines upon which true reform should proceed.

PREFACE

The dates and provisions of our laws, as cited, have been critically compared with the official statutes; and the statistics, except where otherwise stated, have been carefully compiled from the official reports of the Treasury.

The object in view, as in the previous work, has been to provide a compact, reliable manual for ready reference for the banker, the student and the speaker; and equally useful to the general reader desiring information, for whom the subject has been simplified as much as possible.

MAURICE L. MUHLEMAN.

New York City, April, 1908.

INTRODUCTION

BRIEF GENERAL VIEW OF MONEY AND BANKING—WEIGHT AND VALUE OF THE UNITS OF EACH COUNTRY—THE NOMENCLATURE OF COINS—THE PRODUCTION OF PRECIOUS METALS AND THEIR USES.

MONEY is the *medium,* or *tool,* of exchange; that which serves as the means of exchanging labor, commodities and property. Its great utility to the human race may be appreciated when it is borne in mind that, for example, an employer of labor has not ordinarily those things—food, clothing, etc.—which the laborer needs; nor has the laborer the things which the sellers of food, for example, want. Thus the introduction of a medium to facilitate the transactions, is as valuable as the invention of steam railroads to transfer goods.

Anything that may by general consent be agreed upon to serve the purpose is money, in its broadest sense. Many centuries ago the precious metals were fixed upon as most serviceable; and in recent years the civilized world concluded that gold was, for the general purpose, the best; silver and other metals being used only in a subsidiary capacity.

Money is also the standard or *measure of values;* that is to say, we express values in terms of money as we designate weight by pounds, etc. Unlike other measures, money in its ultimate form (gold), is in itself valuable. It must be regarded as a commodity, and is therefore also subject to the law of supply and demand, although in a qualified degree, since it may be said that the demand for gold is practically unsatisfiable in the state of the supply.

There is a further value-measuring function involved which applies to the aggregate supply of money; when by reason of artificial conditions, such as currency laws, the supply is rendered excessive, money will be cheap; if deficient in supply, relative to demand, it will be dear. This obviously influences *prices,* hence affects the welfare of everyone.

Money is also a *store* of values and a standard for deferred payments; in gold form this is readily understood; in other forms, such as promises to pay gold or other value, the element of *credit* enters; and this is a most important factor in modern business affairs. It has a direct connection with *banking,* since banks are the instruments by which credit is facilitated and the efficiency of the money supply increased.

A bank is an institution for the gathering of surplus means of individuals, to be used in loans to other individuals needing means to conduct their business. Such loans are made obviously only to those persons who are believed to be able and willing to repay them in due course; in other words, have credit.

Banks are either private (individuals or partnerships), or corporate; in the United States banking corporations are provided for under both national and state laws. The *capital,* or initial means of the proprietors, is presumed to exist in each class, but the laws scrutinize the existence of capital in corporate concerns more closely than is the case in private banks.

The capital is a guarantee of the solvency of the bank, particularly for *depositors,* who are the ones having surplus funds to place in (loan to) the bank. Most banks find it desirable to increase the capital fund out of the *surplus* of their profits not divided among their proprietors; many of the laws now require such additions from time to time.

Experience has shown that a bank need have on hand only a part of its liability to others in actual cash, because the funds are not called for ordinarily in more than a certain proportion; it has been found desirable to determine by law what proportion of cash should be so held to assure the payment in money when needed; this fund is called the *reserve.*

A classification of banking business, not today applicable here, should be noted: *currency banking,* where the chief element is the use of the bank's credit by the issue of *notes* or promises to pay money and substitutes therefor; and *deposit banking,* where the business is done with the means of depositors loaned to the bank. In a sparsely settled, or poor, community the former method prevails and is indeed almost a necessity. Our state bank history shows the change from the one form to the other as the country developed.

When we come to examine the means which the several nations of the world make use of to effect their exchanges, we find that various forms of money are employed, and most of these forms again vary in different localities. They may, however, be generally classified as follows:

1. Gold coin (or bars).
2. Full legal tender silver coin or silver bars.
3. Certificates of deposit for gold or silver.
4. Subsidiary silver coin (limited legal tender).
5. Minor coin—*i. e.,* base-metal tokens.
6. Bank-notes.
7. Government notes.

Perhaps the most important attribute of any form of money is its *legal tender power;* that is, the power, conferred by law, to discharge a debt payable in money. While every one of the forms given above, has in some countries a greater or less measure of such power, gold alone possesses, at the present time, by virtue of law and commercial usage, the unlimited legal-tender quality throughout the civilized world. It is, therefore, to this extent, the only *international money,* excepting in the far East (China, etc.). Moreover, the value—or rather the purchasing power—of gold is substantially the same throughout the civilized world.

Since the value depends upon the quantity of *pure* metal contained in any given mass, it is of the greatest importance to know the *fineness,* as well as the weight. The fineness indicates the proportion of pure metal, and is usually

expressed in thousandths. The inferior metal is added chiefly to increase the durability of the precious metal, and is termed the *alloy*. Thus: Coin of the United States is 900 thousandths fine, containing 100 thousandths of copper; five thousand ounces of such coin is therefore accepted as four thousand five hundred ounces of pure metal. In large international transactions the weight of the mass is regarded, and not the number of pieces.

In like manner in China and other far eastern countries, where silver is the recognized full legal-tender money, its weight and fineness are matters of first consideration.

Countries using gold only as full legal-tender money are classed as single-gold-standard; where silver alone is so used, the term single-silver-standard is applied; where both metals are coined into full legal-tender money the double-standard is said to prevail. In fact, however, there are now no countries properly classifiable in the last-named category, the coinage of full legal-tender silver having been suspended; but since a number of countries, although adopting the gold standard, still use such coins, they are classified separately as *bi-metallic*. A fourth class, formerly single-silver-standard countries, have adopted the gold standard with an arbitrarily fixed valuation for the chief silver coins, which latter still constitute the principal circulating medium.

Coins are struck at varying *weights* in different countries, and the metal used varies in fineness; the units vary accordingly, requiring computations in making exchanges. The tables below show the weight and fineness of the monetary unit of each of the principal and most minor countries, and the value of such units in money of the United States.

TABLE OF THE WORLD'S MONEY UNITS.

Weights are given in grammes, values in United States coin, fineness in thousandths. In this table the value of silver coins is based upon the coining value of an ounce of silver in the United States, $1.2929. The gramme is equal to 15.432 grains.

I. Bi-metallic Countries.

Country	Unit	Value	Gold Unit		Silver Unit		Subsidiary Coin		
			Weight	Fineness	Weight	Fineness	Weight	Fineness	Value
United States	Dollar	$1.00.	1.672	.900	26.729	.900	25.	.900	$0.93.5
Haiti	Gourde	.96.5	1.613	.900	25.	.900	25.	.835	.87.0
*Argentina	Peso	.96.5	1.613	.900	25.	.900	25.	.900	.93.5
Venezuela	Bolivar	.19.3	.3226	.900	5.	.900	5.	.835	.17.4
The Latin Union: France	Franc								
The Latin Union: Belgium	Franc								
The Latin Union: Italy	Lira	.19.3	.3226	.900	5.	.900	5	.835	.17.4
The Latin Union: Switzerland	Franc								
The Latin Union: *Greece	Drachma								
*Spain	Peseta	.19.3	.3226	.900	5.	.900	5.	.835	.17.4
*Servia	Dinar	.19.3	.3226	.900	5.	.900	5.	.835	.17.4
*Bulgaria	Lew	.19.3	.3226	.900	5.	.900	5.	.835	.17.4
Netherlands	Florin	.40.2	.672	.900	10.	.945	3.57	.640	.09.5
Algeria	Franc	.19.3	.3226	.900	5.	.900	5.	.835	.17.4
Tunis	Franc	.19.3	.3226	.900	5.	.900	5.	.835	.17.4
Dutch Indies	Florin	.40.2	.672	.900	10.	.945	3.57	.640	.09.5

*Depreciated paper has forced circulation; gold at a premium.

II. Gold-Standard Countries.

Country	Unit	Value	Weight	Fineness	Subsidiary Silver Coin: Principal Coin	Weight	Fineness	Equivalent at Coining Rate
Great Britain..	Pound	$4.86 2-3	7.988	.916 2-3	Shilling	5.655	.925	$ 0.21.7
Germany	Mark	.23.8	.398	.900	Mark	5.555	.900	.20.8
Sweden, Norway, Denmark	Krone	.26.8	.448	.900	Krone	7.500	.800	.24.9
Austria-Hun. ..	Krone	.20.3	.33⅞	.900	Krone	5.000	.835	.17.4
Roumania	Ley	.19.3	.3226	.900	Ley	5.000	.835	.17.4
Turkey	Piaster	.04.4	.072	.916 2-3	5-piasters	6.014	.830	.20.7
*Portugal	Milreis	1.08	1.774	.916 2-3	Testoon	2.500	.916 2-3	.09.5
*Brazil	Milreis	.54.6	.8965	.917	Milreis	10.000	.900	.37.4
Chile	Peso	.36.5	.549	.916 2-3	Peso	20.000	.700	.58.3
Canada	Dollar	1.00	No coins.		Half-dol.	11.620	.925	.44.6
Newfoundland	Dollar	1.01.4	1.664	.916 2-3	Half-dol.	11.782	.925	.44.8
Egypt	Pound	4.94.3	8.500	.875	5-piasters	7.000	.833 1-3	.24.3
Russia	Ruble	.51.4	.860	.900	Ruble	19.996	.900	.75
Japan	Yen	.49.8	.833⅓	.900	50-sen	13.478	.900	.50.4
Costa Rica.....	Colon	.46.5	.778	.900	50-cent	12.500	.750	.38.9
*Colombia	Peso	1.00	1.672	.900	50-cent	27.588	.900	1.03.2
Peru	Libra	4.86 2-3	7.988	.916 2-3	Sol	25.000	.900	.93.5
Ecuador.....	Sucre	.48 2-3	.814	.900	Sucre	25.000	.900	.93.5
British Honduras	Dollar	1.00	1.672	.900	50-cent	11.620	.925	.44.6
Uruguay	Peso	1.03.4	1.697	.917	Peso	25.000	.900	.93.5

Australasia, Cape Colony, the British West Indies have the British standard, and in Canada and British Honduras the pound sterling is also a legal tender.

*Depreciated paper has forced circulation; gold at a premium.

III. Silver-Standard Countries; Fluctuating Units.

Country	Unit	Equivalent at Coining Rate	Weight	Fineness	Subsidiary Pieces = to Unit: Weight	Fineness.	Gold Pieces = to Unit: Weight	Fineness	Value
China	Tael†	$1.40.5	37.313	.905 2-3	Various		No coins		
Hong-Kong ..	Dollar	1.00.8	26.956	.900	25.000	.800	No coins		
Indo-China ..	Piaster	1.01.8	27.215	.900	27.215	.900	No coins		
Bolivia	Boliviano	.93.5	25.000	.900	25.000	.900	1.613	.900	$.96.5
*Guatemala, *Nicaragua, *Honduras, Salvador ..	Peso	.93.5	25.000	.900	25.000	.835	1.613	.900	.96.5
Persia	Kran	.17.3	4.600	.900	4.600	.900	2.85	.900	1.704

* Depreciated paper standard. † Ku-ping tael, nominal.

IV. Gold-Standard-Silver-Currency Countries.

Country	Unit	Value	Gold Unit		Silver Unit			Fixed Value	Coining Value
			Wgt	Fineness	Name	Weight	Fineness		
Mexico	Peso	$ .49.8	.83	.916 2-3	Peso	27.073	.9027	$.49.8	$1.01
India	Pound	4.86 2-3	7.988	.903 2-3	Rupee	11.664	.916 2-3	.324	.44.4
*Straits	Dollar	.50	.886	.900	Dollar	26.956	.900	.50.	1.008
*Philippines ..	Peso	.50	.886	.900	Peso	26.956	.900	.50.	1.008
Panama	Peso	1.000	1.672	.900	Peso	25.000	.900	.50.	93.5

* The silver coins are being recoined to prevent exportation. This will reduce the coining value to about 78½ cts.

It will be observed that there is a marked preference shown for the employment of metal 900 thousandths fine; moreover, the majority of the *units* are identical with the franc of the French monetary system; by combining five of its units we approximate the dollar system prevailing in the next largest number of countries. It would therefore require little more than the removal of individual national prejudices to reach an agreement upon a *universal unit.*

Since exchanges are made upon the basis of the pure metal in coins, the theoretic parity between Great Britain and the United States, for example, is represented by the value of the pound sterling, which is $4.86^2/_3$; by adding the cost of transferring the coin or bullion (involving besides freight, insurance, interest, commissions and occasionally certain discounts), we arrive at the *par of exchange;* the amount necessary to discharge a debt of one pound of a New York merchant at the office of a London merchant.

Ratio in coinage is the term used to express the equivalent between gold and silver under the mint laws. Thus it will be seen that the gold five-franc piece weighs 1.613 grammes, while the silver piece of the same denomination weighs 25 grammes; the relation is, therefore, as 1 to 15½; in other words a pound of gold would be coined into as many francs as 15½ pounds of silver. Therefore the coining ratio of France is said to be 1 : 15½.

This applies, however, to full debt-paying silver only: for it will be observed that while the *subsidiary silver* pieces of France bear the same relation in weight, the fineness is less, making the pieces less valuable. In many countries the same result is effected by reducing the weight, instead of the fineness, of subsidiary coin. It is for this reason that such coin is a legal tender for small payments only, rarely over ten dollars in any civilized country; and it is made cheaper to prevent its being exported, being intended solely for domestic use.

In like manner *minor coin,* intrinsically of little value, is a legal tender for very small amounts only; say 25 to 50 cents. In most countries nickel and bronze are now used for this coinage.

In most countries both subsididary and minor coin is redeemable in, or exchangeable for, standard money; this maintains it at parity.

The ratio for coinage when established by each nation was intended to rep-

resent approximately the actual value relation between gold and silver; and it may be said that for many years this was very nearly correct. But the great increase in the production of silver since 1873, and the restriction of its use by many nations, caused such a reduction in its market value, that the ratio is now nearer 30 to 1 of gold. Consequently almost all nations have discontinued the free and unlimited coinage of silver into full debt-paying money; for it is obvious that if any one nation were to do so the silver product costing but 65 to 70 cents per ounce, would be brought to that nation's mints and coined into pieces worth about $1.29 29-100 per ounce, which could be used to pay debts or purchase commodities in that country.

FREE COINAGE is a term used to signify that a mint is open to any one who may choose to bring bullion to be coined; when the bullion produces more dollars or pounds or francs than it cost, the difference is of course profit, and in the case of free coinage the owner gets it. When, however, as in the subsidiary coinage, bullion is bought and coined by the government, the profit or seigniorage is retained by it. This is termed coining on *government account.*

The term *seigniorage* as used, to express the difference between the market value of bullion and its coining value, is not strictly correct. Originally it was the charge which the *seignieur*—(lord or king),—imposed for coining; and it is only by assuming that the difference is such a charge, that the term may be deemed applicable.

By BI-METALLISM, strictly defined, is meant the free and unlimited coinage of both gold and silver into coins of full debt-paying power. Not the mere use of the double standard, but mints actually open to coinage on the terms above stated. No country in the world is, therefore, bi-metallic today, in the strict sense of the term, since those conditions do not now exist anywhere.

PAPER MONEY (including both notes and certificates) is intended as a rule solely for circulation within the boundaries of the countries in which issued. Both forms are found quite plentiful beyond the boundaries, however, for purposes of international exchange in small amounts. They are a legal tender only in the countries where issued, and frequently not even there. *Certificates* represent actual deposits of coin or bullion; and some issues of *notes* are similarly covered fully by metallic money. But notes are generally issued to a greater or less extent on the *credit,* either of the governments or of banks issuing them, and are exchangeable for coin while the governments or banks continue solvent. It is therefore clear that to the extent that notes are issued in excess of the metal held by the issuing bank or treasury, the volume of available circulating media is increased. This excess is usually given in statistical tables under the head of "uncovered notes." Strictly speaking this is not correct, since the metal in hand in a bank cannot be deemed to be *entirely* and solely available to pay notes; some of it must necessarily be held against the deposits of issuing banks.

GOVERNMENT NOTES are issued by comparatively few nations, the United States, Italy, Canada and India being the principal ones. *Bank*-notes are issued in almost every civilized country.

CURRENCY is a term used for all forms of money, although some writers and others also, use it to designate paper money only.

Specie is a term used to designate coin; but frequently *bullion* (uncoined metal), is also included in the designation.

NOMENCLATURE OF COINS.

Generally speaking, the names of coins are traceable to the times when the precious metals passed by weight,—before discs or pieces were cut out and stamped. The *shekel* of the ancient Hebrews was a weight. The Roman *as* represented a pound before it was reduced in weight; the *denarius* of the Romans, the *denier* of France and the *dime* (formerly *disme*) of the United States represent tenths of the principal piece. The *livre* of France, the *pound* of England, the *peso* of Spain's former coinage, all signified weights of metal once equivalent to the nominal value.

Another system of nomenclature of coins is based upon the designation of the power which issues them. Thus, the *ducat* of a duke, the *sovereign,* the *crown* or *krone,* the *imperial,* the *louis d'or, friederichs d'or, napoleons,* etc.

Other coins derived their names from the devices upon them, as the *florin,* which bore a flower; the *escudo,* a shield; the *eagle* of the United States; the *condor* of South America.

The *dollar,* derived from the German *thaler,* was apparently first issued by a community of the Joachims-thal in South Germany, whose pieces were of well-known purity and unchanging value during periods when kings and dukes debased their coin without the slighest consideration for honesty. From this name are derived also the *rigsdaler* of Scandinavia, the *rix-daler* of the Dutch, the Maria Theresa thaler, a unique coin still struck by Austria for the trade with the Levant with the date of 1780 unchanged.

The American dollar is based upon the Spanish *milled* dollar, the piece which probably first bore the raised and corrugated edge now so common, and devised for the purpose of preventing the reduction of the piece by cutting off the rim. Although Spain has long since ceased using this coin, some of its former colonies continue to do so, and the South American countries have today a modified *peso* or dollar, which is in most cases equivalent to the five-franc piece of France. Mexico's old Spanish peso is sometimes called the piece of eight *reals* (derived from *rey,* king), and in the United States, where these dollars or pesos of Spain circulated long after their own coinage was introduced, the reals were in some sections called *shillings,* in others *bits,* and in still others *levies.* They represented a nominal value of 12½ cents.

The Portuguese have also a *real* in their coinage and the present unit of that country is the *milreis*—or 1,000 reis. There the original unit is worth only .108 of a cent. Brazil, which formerly belonged to Portugal, also uses the *milreis,* but its value is only half of that of Portugal.

The *shilling* of Great Britain finds its counterpart in the *skilling* of Scandinavia; the *mark* of Germany, originally also a weight, is also found in the

markka of Finland; the *penny* is found as the *pfennig* in Germany and *penni* of Finland.

The peso is in many sections of the world called the *piaster;* but this piaster is very unlike that of Turkey and the Mohammedan countries, being nearly twenty-five times more valuable. So there are ducats in Austria, in the Netherlands and in Russia, the latter being worth a few cents more than the two others. Florins are still found in Austria, the Netherlands and Great Britain, although no longer used where they first appeared (Italy). The value of the British florin is 2 shillings, of the Austrian 2½ francs, of the Dutch somewhat less.

The French system of *francs* is so largely copied that special attention is directed thereto. The name of this unit is derived from the people who settled in that portion of Europe. As before stated, its value is 19.3 cents; and it is divided into 100 *centimes.* Belgium and Switzerland use the same term for their units, but the equivalent pieces of other countries are known by other names: Italy, *lira* (probably from the name of the weight); Spain, *peseta;* Greece, *drachma,* from its ancient coinage, and divided into 100 *lepta* instead of centimes; Bulgaria calls her franc the *lev* of 100 *stotinki;* Roumania, the *ley* of 100 *banis;* Servia, the *dinar* of 100 *paras* (the name of the Turkish divisional piece); Finland, the *markka* of 100 *penni;* Venezuela, the *bolivar* (after the liberator, Simon Bolivar) of 20 *centavos.* Formerly the French unit was termed the *livre,* which was divided in 20 *sous,* so that the sou is equal to 5 centimes.

Certain coins stand alone in their nomenclature: The *ruble* of Russia and the *rupee* of India. The ruble is divided into 100 *kopecks,* but the divisional pieces have such names as *poltinnik, tchetvertak, abassis, grivinik, pietak.* The rupee is divided into 16 *annas* of 4 *pice,* each of the latter equal to 3 *pie* (of the nominal value of about ¼ of one cent). Persia has a coin called the *thoman* of 10 *krans,* each of the latter equal to 20 *shabis.*

The *crown* of Great Britain is worth 5 shillings, that of Germany (*krone*) very nearly 10 shillings, that of Austria's new coinage about 2 shillings, that of Portugal about 44 shillings, the Scandinavian about 1 shilling.

Japan calls her principal coin, which in the old silver form was very nearly identical with our dollar, the *yen;* it is divided into 100 *sen.* Formerly the unit was the *cobang* and the divisional coins were called *itzebu.*

The peso or dollar of South America is termed *sol* in Peru, *boliviano* in Bolivia, *sucre* in Ecuador, and the similar coin of Hayti is the *gourde.*

Chile arbitrarily reduced the value of its peso, retaining the name; Panama calls its new unit the *balboa,* in honor of the discoverer of the Isthmus; Costa Rica uses the name *colon,* the Spanish form of Columbus.

Portugal has a divisional piece called *testoon,* the Scandinavians have *öre,* Austria had *kreutzer,* and now again *heller,* and Egypt has pieces bearing the euphonious name of *ochr-el-guerche. Guilders* of Holland, *gulden* of the German States, and the *pesos duros* (hard dollars) are obsolete and the new *real* of Spain is worth only about five cents.

The *tael* of China is really a weight only; and there are several of these, varying in value according to the locality. The principal piece used by the

mass of the Chinese is the *cash,* a very cheap coin with a square hole in the center.

Many countries provide for divisional pieces too small to be coined; an example of this is the *mill* (or thousandth of a dollar) of the United States.

Where divisional coins of small nominal value circulate it will be found that the people are either very economical in their habits, or, on the other hand, poor.

The Production of Precious Metals.

The following table exhibits the production of gold and silver for periods since the discovery of America, and the commercial ratio of silver to gold at the end of each period:

Periods.	Gold.		Silver.		Ratio.
	Ounces.	Coining Value.	Ounces.	Coining Value.	
1492-1520 ...	5,221,160	$107,931,000	42,309,400	$54,703,000	10.75
1521-1560 ...	9,902,200	204,697,000	229,885,360	297,226,000	11.30
1561-1600 ...	9,143,460	189,012,000	461,931,200	597,244,000	11.80
1601-1640 ...	10,815,260	223,572,000	525,009,500	678,800,000	14.00
1641-1680 ...	11,593,290	239,655,000	452,221,900	584,691,000	15.00
1681-1720 ...	15,165,155	313,491,000	448,492,500	579,869,000	15.21
1721-1760 ...	28,092,670	580,727,000	620,073,835	801,712,000	14.75
1761-1800 ...	24,752,285	511,675,000	984,947,400	1,273,468,000	15.09
1801-1810 ...	5,715,627	118,152,000	287,469,225	371,677,000	15.61
1811-1820 ...	3,679,568	76,063,000	173,857,555	224,786,000	15.51
1821-1830 ...	4,570,444	94,479,000	148,070,040	191,444,000	15.80
1831-1840 ...	6,522,913	134,841,000	191,758,675	247,930,000	15.75
1841-1850 ...	17,605,018	363,928,000	250,903,422	324,400,000	15.83
1851-1860 ...	64,482,933	1,332,981,000	287,920,128	372,261,000	15.29
1861-1870 ...	61,098,343	1,263,015,000	392,267,776	507,174,000	15.56
1871-1880 ...	55,670,618	1,150,814,000	710,463,078	918,578,000	18.05
1881-1890 ...	51,280,184	1,060,056,000	1,004,576,877	1,298,847,000	19.76
1891-1900 ...	101,647,521	2,101,241,400	1,616,373,178	2,089,856,400	30.28
1901 ...	12,625,527	260,992,900	173,011,283	223,691,300	34.68
1902 ...	14,354,680	296,737,600	162,763,483	210,441,900	39.15
1903 ...	15,852,620	327,702,700	167,689,322	216,810,300	38.10
1904 ...	16,804,372	347,377,200	164,195,266	212,292,900	35.70
1905 ...	18,268,696	377,647,700	169,588,839	219,266,300	33.87
1906 ...	19,366,550	400,342,100	165,754,843	214,309,200	31.20
Total ...	584,231,094	$12,077,130,600	9,831,534,085	$12,711,478,300	

The preliminary estimate of the production of gold for 1907 shows a falling off of about $3,000,000 in value.

The great increase in gold production since 1890 had a potential influence upon the settlement of the question of standards in which the world had been interested for so many years. This is discussed in the chapter dealing with international monetary events. The general effect of the enormous addition to the world's money supply is also discussed in several places elsewhere in the volume.

The increase has been due chiefly to new discoveries, but also to improved processes of recovering the metal in treating ores.

To show the annual product by countries in recent years the following table has been prepared:

Gold.

(Values in Millions of Dollars.)

Year	United States	Canada	Mexico	Other America	Russia	Other Europe	Australia	Africa	India	China	Other Asia	Totals
1891	33	1	1	10	24	3	31	16	2	6	4	131
1892	33	1	1	10	25	4	34	24	3	8	3	146
1893	36	1	1	11	28	3	36	29	4	7	1	157
1894	39	4	1	13	24	4	42	40	4	9	1	181
1895	47	2	6	12	26	5	47	41	5	9	3	203
1896	53	3	6	11	22	3	44	45	6	8	1	202
1897	57	6	7	11	23	4	53	59	7	9	3	239
1898	64	14	8	11	25	2	65	80	8	6	4	287
1899	71	21	9	11	22	2	79	73	9	6	4	307
1900	79	28	9	12	20	2	74	9	9	6	7	255
1901	79	24	10	13	23	2	77	9	9	9	6	261
1902	80	21	10	14	23	2	82	39	10	9	6	296
1903	74	19	11	13	25	2	89	68	11	7	9	328
1904	80	16	13	11	25	3	88	86	11	5	9	347
1905	88	15	16	12	22	3	86	113	12	2	9	378
1906	94	12	19	14	19	3	82	135	12	2	8	400
1907*	90	9	17	18	21	3	75	140	10	2	12	397

*Provisional Estimate.

The effect of the Boer war upon the output of Africa is noticeable.

The following table, similar to the above, shows the source of the silver supply of the world for the same years:

Silver.

(Values in Millions of Dollars)

Year	Values at coining rate, $1.29.29 per oz. fine							Market Price per oz. fine	Commercial Value	Ratio to Gold
	United States	Mexico	Australia	South America	Europe	Other	Total			
1891	75	45	13	21	17	6	177	98.80c.	135.3	20.92
1892	82	51	17	24	19	5	198	87.14	133.2	23.72
1893	78	57	26	25	19	10	215	78.03	129.5	26.49
1894	64	61	23	36	18	15	217	63.48	106.4	32.56
1895	72	67	20	37	15	15	226	65.41	113.6	31.60
1896	76	59	16	22	22	8	203	67.57	105.8	30.59
1897	70	70	15	25	21	10	212	60.44	98.4	34.20
1898	70	73	16	23	21	11	214	59.01	97.5	35.03
1899	71	72	16	32	17	10	218	60.15	101.0	34.36
1900	75	74	17	32	17	9	224	62.01	107.6	33.33
1901	71	75	13	36	18	11	224	59.59	103.8	34.68
1902	72	78	10	22	19	9	210	52.80	85.5	39.15
1903	70	91	12	16	20	8	217	54.26	90.6	38.10
1904	75	79	19	12	20	7	212	57.88	95.2	35.70
1905	73	84	16	15	19	12	219	61.03	103.4	33.87
1906	73	71	18	15	18	19	214	67.69	112.2	30.54
1907	73	70	18	15	17	15	208	66.15	106.5	31.24

The quotation of the price of silver is based upon the price of bullion in the London market, where it is given in pence per ounce British standard, which is 925-thousandths fine. Converting the pence into cents, and the fineness to 1,000, and allowing for the prevailing rate of exchange between London and New York, the corresponding price in New York in cents is obtained.

The commercial ratio is derived by dividing the New York market price of the fine ounce of silver into that of the fine ounce of gold, which is $20.672.

It is noteworthy that the demand for silver continues fairly up to the supply, keeping the price fairly steady. The increased demand is due to the need for additional subsidiary coin which the prosperous times call for. In 1906 the price rose to 72 cents, the maximum in recent years. Of course the greatest demand comes from Asia.

The important fact demonstrated by the statistics, is that there is no great surplus of the metal in stock; it appears to be always salable to the far East at a price. The coinage of pesos in Mexico ceased in 1905, yet the figures show that other countries coined 155 millions of silver in 1906; of this sum 42 millions was in pieces *recoined,* a considerable part having been former full-tender coins.

The Consumption of Gold and Silver.

A very considerable quantity of the precious metals is used for industrial purposes annually and the data collected show that this use is steadily growing.

For many years gold has been exported to India, China and the Orient generally, and retained there in ornaments and hoards; for it is not there used as a circulating medium. The amounts so lost to the commerce of the world are variously estimated. Probably 1000 million dollars are so held in those parts of the world. Fully $25,000,000 has been annually exported to India in excess of the imports thence for a long series of years; this sum added to the amount annually used in the arts, left a comparatively small amount for the purpose of coinage, in the years when the product was only $100,000,000 or thereabout.

Estimated Use of Gold and Silver in the Arts (Soetbeer).

(In millions of dollars, excluding old material.)

Country	Average, 1871-1880		1885	
	Gold	Silver	Gold	Silver
United States	9.0	4.2	13.0	4.8
Great Britain	11 3	2.9	11.2	2.9
France	11.2	3.1	11.1	3.1
Germany	7.8	3.1	8.0	3.4
Switzerland	7.5	1.0	6.6	1.0
Holland and Belgium			1.9	1.0
Austria-Hungary	1.6	1.3	1 6	1 3
Italy	3.0	0.8	3.0	0.8
Russia	1.6	1.3	1.6	1.3
Others	2.6	1.7	1.3	1.7
Total	55.6	19.4	59.3	21.3

The estimates of industrial consumption in more recent years have been as follows, in millions of dollars, silver being taken at the commercial value:

	1893		1903		1906	
	Gold	Silver	Gold	Silver	Gold	Silver
United States	13.5	5.8	29 0	10.8	32.6	12.2
Other countries	36.5	10.8	47.4	16.2	89.0	45.5
Total	50.0	16.6	76.4	27.0	121.6	57.7

MONETARY SYSTEM OF THE UNITED STATES

GOLD COIN—SILVER DOLLARS—SUBSIDIARY SILVER COIN—MINOR COIN—GOLD CERTIFICATES—SILVER CERTIFICATES—UNITED STATES NOTES—TREASURY NOTES OF 1890—NATIONAL BANK NOTES.

The United States of America has probably the most heterogeneous system of money of any of the civilized countries, and it is due solely to the unbounded faith of the people in the unlimited credit of the nation, that all of these kinds have for so many years circulated side by side at a parity, even during the overwhelming credit panic of 1893, when in fact every form of money was held at a premium.

Of the several classes of circulating media mentioned at the outset, the people of the United States use all. The gold coin possesses full debt-paying power; the silver dollar, the United States note and the Treasury note of 1890 are equally good tenders unless otherwise specified in the contract; the gold and silver certificates and the national bank notes, while not a legal tender, are receivable for certain public taxes and by the banks; subsidiary silver coin possesses a limited debt-paying power, and minor coin even less. Many changes have taken place in the character, weight and fineness of the several kinds of coin, and the paper representatives have been modified from time to time as conditions dictated.

"Lawful money" is a term used to designate the full legal tender forms; yet for certain purposes, as shown hereafter, gold and silver certificates are to be included.

The coinage system was established by the act of Congress of April 2, 1792, providing for the organization of a mint.

Gold Coin.

Gold was coined at the fineness prevailing in Great Britain, viz.: eleven-twelfths, or 916⅔ thousandths, the remaining parts, or alloy, consisting of silver and copper, not to exceed one-half of the former. The principal coin was the eagle ($10), which weighed 270 grains standard, or 247½ grains fine; half eagles ($5) and quarter eagles ($2½) were also provided for.

Gold coin was then made a legal tender "for all payments whatsoever," and has remained so to this day. The coinage was unlimited and free, excepting that a charge of one-half of one per cent. was imposed in cases where depositors preferred immediate payment for bullion.

In 1834 (June 28) Congress changed the weight of the eagle to 258 grains

standard and 232 grains pure gold; the half-eagle and quarter-eagle were reduced correspondingly; this reduced the fineness of the coinage to nearly 900 thousandths (899.225). To correct this the law of January 18, 1837, fixed the fineness at 900-thousandths; since the weight of the eagle was not changed the pure gold therein was increased to 232.2 grains; the divisional pieces were changed in proportion.

In 1849—law of March 3—double eagles ($20 pieces) and dollars were directed to be coined and made full legal tender. The act of February 21, 1853, provided for a three-dollar piece.

A revision of the coinage laws was enacted February 12, 1873, by which the gold dollar was made the unit; the gold coinage alloy was to be copper alone. A coinage charge of one-fifth of one per cent. was imposed, but this was repealed in 1875 (act of January 14), so that the coinage is again free.

The coinage of gold dollars and three-dollar pieces was suspended by the act of September 26, 1890.

In order to settle the question of the monetary standard, the law of March 14, 1900, specifically fixed the (theoretic) gold dollar as the "standard unit of value" with which all other forms of money were to be maintained at parity.

Description of Present Gold Coins.

Denomination.	Weight.	Pure Metal.	Diameter.	Thickness.
Double-eagle	516 grains	464.4 grains	1.35 in.	.077 in.
Eagle	258 grains	232.2 grains	1.05 in.	.060 in.
Half-eagle	129 grains	116.1 grains	.85 in.	.046 in.
Quarter-eagle	64.5 grains	58.05 grains	.75 in.	.034 in.

Deduced from the above table, the value of gold of standard fineness (.900) is $18.60½, and if *fine* or pure, $20.67.2 per ounce.

Gold coin if naturally abraded more than one-half of one per cent. in twenty years as shown by the date of coinage (or ratably for a shorter period), is a legal tender for its bullion value only.

Special "memorial" gold dollars were coined in 1902 and 1903 for the Louisiana Purchase Exposition, $250,000; and in 1904 for the Lewis and Clarke Exposition $60,069.

Gold Coinage of the United States.

Denomination.	1793-1848.	1849-1907.	Total.
Double-eagles ($20)	.....	$1,997,340,520.00	$1,997,340,520.00
Eagles ($10)	$25,662,270	399,251,450.00	424,913,720.00
Half-eagles ($5)	45,265,355	273,723,215.00	318,988,570.00
Three-dollars ($3)	.....	1,619,376.00	1,619,376.00
Quarter-eagles ($2.50)	5,413,815	26,997,277.50	32,411,092.50
Dollars ($1)	.....	19,499,337.00	19,499,337.00
Special pieces	.....	310,069.00	310,069.00
Total	$76,341,440	$2,718,741,244.50	$2,795,082,684.50

Silver Dollars.

The original silver dollar authorized by the mint act of 1792, was, as nearly as could be arrived at, the equivalent of the "Spanish milled dollar," containing 371¼ grains of pure silver, and weighing with the alloy 416 grains. This was, therefore, at a fineness of 892.4-thousandths, the balance being copper; and the ratio to gold was 15 to 1. The coin was called the "dollar or unit,'" and was a legal tender for all purposes. The coinage was free and unlimited. By the change in the weight of gold coins in 1834 (see *ante*), the ratio was altered to 16.002 to 1.

The law of January 18, 1837, already referred to, fixed the weight of the silver dollar at 412½ grains, and the fineness at 900-thousandths; leaving the weight of pure silver the same. This changed the ratio to 15.988 (or nearly 16) to 1, and thus fixed the coining value of silver at $1.29 $^{29}/_{100}$ per ounce.

The mint act of 1873 discontinued the coinage of the dollar by omitting it from the list of authorized coins.

In 1878 (February 28), Congress passed, over the veto of President Hayes, a law again authorizing its coinage, but in a limited amount only; not less than $2,000,000 nor more than $4,000,000 worth of silver was to be purchased monthly and coined into the dollars of 1837; the coin was made a legal tender for all debts, public and private, unless otherwise stipulated—excepting for the redemption of gold certificates of the government. The seignorage accrued to the Treasury. (The minimum amount was invariably purchased and coined.)

The act of July 14, 1890, amended the act of 1878, provided for a coinage of silver purchased under it (see Treasury Notes of 1890, *post*) of not more than 2,000,000 ounces monthly until July 1, 1891; thereafter the coinage was limited to the amount required by the Treasury to redeem the notes issued under the same act; the seignorage arising to be likewise coined.

The act of March 3, 1887, directed that the "trade dollars" redeemed be coined into "standard" dollars of 1878.

By the act of November 1, 1893, the purchase of silver was discontinued, but the coinage of dollars was not interrupted. The act of June 13, 1898 directed the coinage of not less than $1,500,000 monthly. By 1905 the bullion was all converted into coin.

The act of March 14, 1900, reaffirmed the legal tender quality of the dollar and its parity with gold; but no provision is made for its exchange into gold.

The coinage of silver dollars from 1793 to June 30, 1905, inclusive, has been as follows:

Prior to 1837	$1,440,517
1837 to 1873	6,590,721
1874 to 1877	None.
Under act of 1878	378,166,793
From trade dollars redeemed	5,078,472
Under act of 1890	187,027,345
Total	$578,303,848

In 1900 there were coined 50,000 dollars of special design known as "La Fayette Souvenir" dollars, authorized by an act of March 3, 1899.

The seignorage on the coinage of dollars from 1878 to 1905 aggregated over $118,000,000, which was covered into the Treasury as revenue.

Only a limited amount of dollars actually circulate, not more than $75,000,000 to $85,000,000 being outside of the Treasury at any time in recent years, notwithstanding the free transportation out of the government offices. But those held in the Treasury are almost all on deposit for silver certificates.

The dollar is $^{8}/_{100}$ of an inch thick, and its diameter is 1½ inches.

The following table gives for each year since 1873 the highest, lowest and average values of the bullion contained in a silver dollar, measured by the market price of the metal; also the quantity of silver, in grains, which a dollar in gold would have bought at the average rate. The dollar, it will be recalled, contains 371¼ grains of pure silver. The legislation of 1878 clearly failed to restore the value of the dollar to par, and that of 1890 raised it an average of less than 9 cents. At the average rate for 1907 the dollar would have to be nearly twice its present weight to be at par with the world's price of silver.

Bullion Value of Silver Dollar.

Calendar Years	High	Low.	Average	Grains for $1.00	Calendar Years	High.	Low.	Average	Grains for $1.00
1873	$1.016	$0.981	$1.004	369.77	1891	$.827	$.738	$.764	485.76
1874	1.008	.970	.988	375.76	1892	.742	.642	.674	550.79
1875	.977	.941	.964	385.11	1893	.655	.513	.604	615.10
1876	.991	.792	.894	415.27	1894	.538	.454	.491	756.04
1877	.987	.902	.929	399.62	1895	.532	.461	.505	733.87
1878	.936	.839	.891	416.66	1896	.541	.504	.522	711.20
1879	.911	.828	.868	427.70	1897	.505	.400	.467	794.96
1880	.896	.875	.886	419.49	1898	.481	.424	.456	814.14
1881	.896	.862	.881	421.87	1899	.491	.451	.465	791.84
1882	.887	.847	.878	422.83	1900	.509	.463	.479	774.10
1883	.868	.847	.858	432.69	1901	.501	.423	.461	805.43
1884	.871	.839	.861	431.18	1902	.442	.367	.408	909.17
1885	.847	.794	.823	451.09	1903	.483	.368	.420	884.67
1886	.797	.712	.769	482.77	1904	.466	.434	.448	828.70
1887	.799	.733	.758	489.78	1905	.506	.443	.472	786.55
1888	.755	.706	.727	510.66	1906	.556	.469	.524	712.21
1889	.752	.746	.724	512.93	1907	.541	.410	.505	733.87
1890	.926	.740	.810	458.83					

Subsidiary Silver Coin.

The original mint law of 1792 made the subsidiary coins exactly proportionate in weight and fineness to the silver dollar, and they were also legal tender in any amount. The act of 1837 changed them, as exhibited in the following table:

Denomination.	1792. Weight. Grains.	1837. Weight. Grains.	Pure Metal in Both. Grains.
Half dollar	208	206 1-4	185 10-16
Quarter-dollar	104	103 1-8	92 13-16
Dime	41 3-5	41 1-4	37 2-16
Half-dime	20 4-5	20 5-8	18 9-16
Fineness	892.4	900	
Ratio	15 to 1	15.988 to 1	

A three-cent piece was provided for by the act of March 3, 1851, weighing 12.3 grains, 75 per cent. thereof being silver and 25 per cent. copper; therefore, only 750-thousandths fine. It was made a legal tender for only thirty cents.

The act of February 21, 1853, provided for a reduction in the weight of subsidiary coins, and that of March 3, 1853, for a three-cent piece of the same proportionate value; the half-dollar was made to weigh 192 grains, its fineness remained at 900-thousandths, the pure silver being 172.8 grains; the ratio to gold was hence 14.884 to 1. The legal tender power was limited to five dollars, and the seignorage arising from the coinage was charged with the distribution of the coins to the people free of cost for transportation.

The nickel three-cent piece provided for by the act of March 3, 1863, and the nickel five-cent piece by the act of May 16, 1866 (see Minor Coin, *post*), took the places of the silver pieces of these denominations; but a few were, nevertheless, coined annually until the mint act of 1873 dropped them from the coinage.

Under this last-mentioned act the change to the present coinage took place.

Description of Present Subsidiary Coins.

Denomination.	Weight. Grains.	Pure Silver. Grains.	Diameter.	Thickness.
Half-dollar	192.9	173.61	1 1-5 in.	.057 in.
Quarter-dollar	96.45	86.805	19-20 in.	.045 in.
Dime	38.58	34.722	7-10 in.	.032 in.

The fineness of all is 900-thousandths. The ratio to gold is therefore 14.953 to 1. The legal tender power was continued in the law of 1873 at five dollars, but the act of June 9, 1879, increased it to ten dollars, and provided for the redemption of the coins (if not mutilated) in "lawful money," at the Treasury or any sub-treasury in sums or multiples of $20, and for their reissue in like sums. The free delivery was also continued.

The half-dollar now weighs exactly 12½ grammes, two being equal in weight and fineness to the five-franc piece of France.

A twenty-cent piece, weighing as much as two dimes, was authorized by the act of March 3, 1875, but the coinage was discontinued by the act of May 2, 1878.

The present design for the subsidiary coins was adopted in 1891, under the law of September 26, 1890.

The amount of subsidiary coin was limited by the acts of July 14, 1875, and April 17, 1876, to the sum needed to retire fractional paper currency, then about $42,000,000; the act of July 22, 1876, increased the limit to $50,000.000; but considerable sums of this coin which had disappeared during the suspension of specie payments (1862-1878) reappeared and there was a redundancy of subsidiary coin for a number of years. The growth of the country and its business soon reversed this condition, and the limit has been increased from

time to time. The act of March 14, 1900, fixed it at $100,000,000, but this was soon exceeded and the act of March 3, 1903, removed all limit to the volume.

Annual appropriations are made by Congress to cover the loss on the recoinage of worn pieces, which are sorted out in Treasury offices as received.

Subsidiary Silver Coinage, 1792-1907.

	Sept., 1792— Feb., 1853.	Feb., 1853— Feb. 1873.	Feb., 1873— June 30, 1907.	Total.
50c.	$66,280,640.50	$32,666,832.50	$70,527,758.50	$169,475,231.50
25c.	3,994,040.50	17,879,790.50	63,225,786.75	85,099,617.75
20c.	.....	.....	271,000.00	271,000.00
10c.	3,890,230.10	4,908,520.00	44,847,555.50	53,646,305.60
5c.	1,825,126.40	3,055,093.00	.....	4,880,219.40
3c.	744,927.00	537,160.20	.....	1,282,087.20
Total	$76,734,964.50	$59,047,396.20	$178,872,100.75	$314,654,461.45

Silver bullion for subsidiary coinage has usually been purchased specifically; but the act of March 14, 1900, authorized the use of part of the bullion purchased with Treasury notes under the act of July 14, 1890 (*post*).

The occasion of the World's Fair (1892-3) was utilized to issue souvenir coins in denominations of half-dollars and quarters; which, while of a different design, possessed all the other characteristics of subsidiary coin of the United States, being also a legal tender to the extent of ten dollars. The act of August 5, 1892, provided for $2,500,000 in halves and that of March 3, 1893, for $10,000 in quarters.

The actual issue was as follows:

Halves of 1892	$ 475,000.00	
Halves of 1893	2,026,000.00	
		$2,501,000.00
Quarters of 1893		10,000.00

The coins were made from bullion obtained by melting down old subsidiary pieces; so that the volume was not increased by this coinage.

Minor Coin.

The minor or token coinage of the United States was at first composed entirely of copper, but more recently nickel and bronze have been used. All sorts of tokens circulated in the early days of the republic. The original mint act (of 1792) provided for a cent weighing 11 pennyweights (264 grains) and a half cent of one-half the weight. The act of May 8, 1792, provided that when $50,000 of these coins had been struck, no other copper coins should pass current. Actually no such pieces were coined, for the act of January 14, 1793, changed the weight of the cent to 208 grains and that of the half cent to 104 grains. In 1795 the President was given power to reduce the weights of these coins, and under proclamation of January 26, 1796, he reduced them to 168 and

84 grains respectively; Congress on January 18, 1837, fixed these weights by statute.

By the act of February 21, 1857, the weight of the cent was changed to 72 grains, 88 per cent. of which was to be copper and 12 per cent. nickel. The coinage of the half cent. was discontinued.

In 1864 the act of April 22 reduced the weight of the cent to 48 grains, and changed the composition to bronze, 95 per cent. copper and 5 per cent. tin and zinc. The pieces were to be legal tender to the amount of ten cents. This is the present one-cent piece, having been continued by the mint law of 1873.

The same act of 1864 provided for a two-cent piece of the same material (bronze), weighing 96 grains, and legal tender to the amount of twenty cents.

A three-cent piece composed of not more than 25 per cent. nickel and 75 per cent. copper, weighing 30 grains, and legal tender to the extent of sixty cents, was authorized by the act of March 3, 1863; the same act reduced the legal tender power of the cent and two-cent pieces to four cents.

A five-cent piece composed of 25 per cent. nickel and 75 per cent. copper, weighing 77.16 grains, and legal tender to the amount of one dollar, was provided for by the act of May 16, 1866; and this coin was made redeemable at the Treasury in sums of not less than $100.

By the act of March 3, 1871, *all* minor coins were made redeemable in "lawful money" in sums not less than $20.

The mint act of 1873 made all minor coins a legal tender to the amount of twenty-five cents, and discontinued the coinage of the two-cent piece; the act of September 26, 1890, dropped the three-cent nickel piece from coinage.

The present coins are, therefore:

Five-cent nickel, of 77.16 grains, 75 per cent. copper, 25 per cent. nickel.

One-cent bronze, of 48 grains, 95 per cent. copper, 5 per cent. tin and zinc.

These are legal tender to the amount of twenty-five cents, redeemable at any sub-treasury in sums of $20 or more, furnished free of transportation charge from the mint at Philadelphia, and obtainable in exchange for any other form of money at any sub-treasury.

The dimensions are: Five-cent piece: diameter, .8 of an inch; thickness, .062 of an inch. One-cent piece: diameter, ¾ of an inch; thickness, .043 of an inch.

Minor Coinage, 1793-1907.

Denomination.	Periods.	Amount.
Half cents	1793-1857	$ 39,926.11
Copper cents	1793-1857	1,562,887.44
Copper-Nickel cents	1857-1864	2,007,720.00
Bronze cents	1864-1907	15,750,938.93
Two-cent pieces	1864-1873	912,020.00
Three-cent nickels	1865-1889	941,349.48
Five-cent nickels	1866-1907	31,558,554.45
Total		$52,773,396.41

The supply of minor coin is regulated, as nearly as may be, by the apparent needs, by the Director of the Mint, under the supervision of the Secretary of the Treasury. Over $21,000.000 of the total coinage was executed between 1896 and 1906, the great activity in business having stimulated the demand.

The pieces of the old coinage are retired as rapidly as they are presented for redemption at Treasury offices.

Gold Certificates.

The Secretary of the Treasury was authorized by act of March 3, 1863, to receive deposits of gold coin and bullion and to issue therefor certificates in denominations of $20 and upwards, the gold to be held in the Treasury for the payment of the certificates on demand; such certificates might also be issued upon gold in the Treasury, in payment of interest on the public debt. The act authorized the amount of certificates outstanding to exceed by 20 per cent. the gold coin and bullion in the Treasury. The certificates were not made legal tender, but were receivable for payment of duties on imports (then payable only in coin); they were payable "to order" and passed by indorsement. The issue began November 13, 1865. and was suspended December 1, 1878 (to facilitate resumption of specie payments on January 1, 1879).

Another issue of gold certificates was authorized *and directed* by the 12th section of the act of July 12, 1882. Deposits were to be received in gold coin only, in sums not less than $20, and the certificates were to be in denominations not less than $20, corresponding with the denominations of United States notes; the coin received to be retained in the Treasury for the payment of the certificates on demand. The limitation upon the issue was fixed so that when the amount of gold coin and bullion in the Treasury reserved for the redemption of United States notes fell below $100,000,000 the issue was to be suspended.

The certificates are not a legal tender, but are receivable for customs, taxes and all public dues, and when so received may be reissued; they are also available for the reserves of national banks. They were issued payable "to bearer" only, until 1888, when a series payable "to order" was also provided by the Secretary of the Treasury, but in denominations of $5,000 and $10,000 only.

On April 15, 1893, the reserved gold fell below $100,000,000 and the issue of certificates was suspended; $100,000 were issued when in February, 1894, the reserve for a short time rose beyond that amount, and in November, 1894, there were *reissued* $130,000 during a few days that the reserve was again in excess of the fixed sum. Subsequently the reserve was maintained above the minimum for several months and the issue was temporarily resumed.

But the expediency of continuing the use of this form of currency when the gold balance was low, was questioned and for several years (1894-1899) few were issued. The act of March 14, 1900, again directed their use, substantially on the terms of the act of 1882; but one-fourth of the amount was to be in denominations of $50 and less; and the Secretary of the Treasury was given the power to suspend the issue, in his discretion, when the general treasury fund of the United States notes and silver certificates exceeds $60,000,000,

indicating a scarcity of gold in that fund. The act of May 26, 1906, provides that the issue shall be suspended when the gold reserve in coin form, falls below $50,000,000.

The act of March 3, 1907, authorizes the issue of these certificates in denominations as low as $10; the wisdom of this course is questionable, since it scatters gold funds more widely.

These certificates as well as the silver certificates (*post*) are merely "warehouse receipts" for the coin on deposit; while deemed an obligation of the government, they are strictly exchangeable only into the coin which they represent.

Gold Certificates, Issued and Outstanding.

Denominations.	Issues and Reissues.				Outstanding June 30, 1907.
	First Series. 1865-1878.	Second Series 1882-1889	Third Series 1900-1907	Total	
$ 10	.....	.....	$ 40,000	$ 40,000	$ 36,000
20	$ 960,000	$ 27,370,000	479,590,000	507,920,000	250,778,364*
50	.....	21,400,000	101,800,000	123,200,000	50,115,155*
100	20,234,300	24,840,000	138,760,000	183,834,300	71,358,850*
500	32,844,000	29,250,000	35,850,000	97,944,000	17,065,000
1,000	121,881,000	60,300,000	104,200,000	286,381,000	61,346,500*
5,000	457,885,000	114,235,000	91,920,000	664,040,000	81,315,000
10,000	314,330,000	280,510,000	576,900,000	1,171,740,000	146,230,000
Totals .	$948,134,300	$557,905,000	$1,529,060,000	$3,035,099,300	$678,244,869

* Fractional redemptions of mutilated certificates.

Silver Certificates.

These certificates are issued upon deposits of silver dollars (or upon such dollars held in the Treasury) under the act of February 28, 1878, which authorized the coinage of the dollars. At first deposits were limited to $10 or a multiple thereof, and certificates to denominations of $10 and upwards; but the act of August 4, 1886, required the issue of such certificates in denominations of $1, $2 and $5. The issue is, of course, limited to the amount of silver dollars deposited in the Treasury, and the dollars called for by the certificates are actually so held. The certificates are not a legal tender, but are receivable for customs, taxes and all public dues; when so received they may be reissued; and by the act of July 12, 1882 (section 12), they may be held by national banks as part of their reserves.

The act of March 14, 1900, provided that only ten per cent. of the volume was to be in $20, $50, and $100 denominations, the rest in $10 and under; the larger denominations were to be canceled as received by the Treasury. This was done partly to increase the supply of small denominations of currency for which there was pressing demand, partly because it is desirable that the retail money be largely in this form.

These certificates are not by law exchangeable for any other form of money except the dollars; but are generally received at the Treasury offices for subsidiary and minor coin as well.

Silver Certificates, Issued and Outstanding, 1878-1907.

Denominations.	Issues and Reissues.	Outstanding.	
		June 30, 1897.	June 30, 1907.
$ 1	$808,856,000	$ 31,064,204.10	$108,051,457.10*
2	411,968,000	18,122,674.40	55,024,094.40*
5	1,601,660,000	101,736,234.50	289,604,597.50*
10	574,514,000	113,372,526.00	12,396,521.00*
20	290,866,000	67,148,010.00	7,835,550.00*
50	69,450,000	15,013,985.00	1,871,860.00*
100	81,540,000	28,659,370.00	907,420.00*
500	16,650,000	177,500.00	35,500.00
1,000	32,490,000	185,000.00	50,000.00
Totals	$3,887,994,000	$375,479,504.00	$475,777,000.00

* Fractional parts of paper money are redeemed in proportion; this accounts for odd amounts of paper money outstanding here and elsewhere in this volume.

The great increase in small denominations, and the decrease of the amount of the larger ones under the operation of the law of 1900, are shown by comparison of the two columns of the table showing the amounts outstanding.

United States Notes.

Prior to 1861 no notes not bearing interest or designed to circulate as money, were issued by the United States. But on July 17, 1861, Congress directed the issue of $50,000,000 of demand notes in denominations less than $50, in exchange for coin or in payment of debts due by the government; the notes were to bear no interest, but were receivable for customs and all public dues, and might be reissued; they were redeemable on demand at the subtreasuries in New York, Philadelphia or Boston. The power to issue them was limited to December 31, 1862.

An additional amount of $10,000,000 was authorized by the act of February 12, 1862. In all $60,030,000 were issued in denominations of $5, $10 and $20; by June 30, 1863, over $56,000,000 were canceled, and on June 30, 1907, there were outstanding only $53,282.50.

The act of February 25, 1862, went a step farther, directing the issue of $150,000,000 of notes, bearing no interest, and making them a legal tender for all debts, public and private, excepting custom duties and interest on the public debt. The notes were, however, convertible into 6 per cent. 5-20 year bonds in sums of $50 or multiples thereof. At first no denominations under $5 were permitted (this was changed in June, 1862); $50,000,000 of the issue was to be used in redeeming the demand notes of 1861; and the notes when received

into the Treasury might be reissued. On June 11, 1862, Congress increased the issue to $300,000,000, and on March 3, 1863, to $450,000,000. This last law abrogated the right to convert the notes into bonds after July 1, 1863, which materially diminished their value.

These notes were issued distinctly as a "war measure" and at the time their retirement after the close of the war was regarded as certain.

The highest amount of notes outstanding at any time was $449,338,902 on January 3, 1864.

The issue was limited by act of June 30, 1864, to $400,000,000 beside $50,000,000 to be used for a short time to redeem temporary loans. When this redemption was completed the volume was gradually reduced, but Congress, by act of April 12, 1866, limited the retirement to $10,000,000 monthly for six months and $4,000,000 monthly thereafter; authority was also given by this act to fund the notes into bonds.

By December 31, 1867, the amount outstanding was reduced to $356,000,000; and by act of February 4, 1868, the further retirement or funding of notes was suspended. (This act became law without the President's approval.)

On March 18, 1869, Congress solemnly pledged the faith of the United States to the payment of these notes in coin or its equivalent and to make provision at the earliest practical period for their redemption in coin. This was called "The Public Credit Act." No actual retirement followed however.

During the panic of 1873 the Treasury increased the amount outstanding by issuing from the presumed reserve of $44,000,000 (the difference between $400,000,000 and $356,000,000), nearly $27,000,000, bringing the amount outstanding up to $382,979,815. The act of June 20, 1874, fixed the maximum amount of the notes in use at $382,000,000.

In 1874 Congress passed a bill to increase the issue, but it was vetoed by the President. The act of January 14, 1875, provided that the notes be redeemed in coin, in sums not less than $50, at the sub-treasury in New York, on and after January 1, 1879; authorized the retirement of such notes to an amount equal to 80 per cent. of the new national-bank circulation then being issued, but not to exceed in all $82,000,000. The Secretary of the Treasury was also authorized to sell bonds to obtain coin, and to add such coin as might be available in the Treasury to provide for the redemption of the notes on and after January 1, 1879. For this purpose the Treasury accordingly sold bonds, for which $96,500,000 in gold coin was obtained. This act is known as the "Resumption Act."

The retirement of notes followed until Congress on May 31, 1878, prohibited the further cancellation and directed the reissue of such as might be received or redeemed by the Treasury. The amount outstanding has therefore ever since remained at $346,681,016, as it was at the close of business on the day the act was approved.

The Gold Premium.

Specie payments having been suspended generally, in all the states east of the Rocky Mountains, in December, 1861, gold commanded a premium and the

United States notes fell below par, continuing so until the end of 1878. The premium on gold and the gold value of the notes fluctuated as follows during the period:

Calendar Year	Currency Price of Gold. January.	Gold Price of Currency. January.	Price of Gold During the Year.		Average Gold Value of U. S. Notes.	Average Currency Value of Gold.
			Highest.	Lowest.		
1862	$1.03	97.09 cts.	$1.34	$1.01⅛	88.3 cts.	113.3 cts.
1863	1.33⅝	74.84	1.72½	1.22½	68.9	145.2
1864	1.51⅝	65.95	2.85	1.51½	49.2	203.3
1865	1.44¼	69.32	2.34⅜	1.28½	63.6	157.3
1866	1.44½	69.20	1.67⅜	1.25½	71.0	140.9
1867	1.33	75.18	1.46⅜	1.32⅛	72.4	138.2
1868	1.33¼	75.04	1.50	1.32	71.6	139.7
1869	1.35	74.07	1.62½	1.19½	75.2	133.0
1870	1.20	83.33	1.23¼	1.10	87.0	114.9
1871	1.10¾	90.29	1.15⅝	1.08⅜	89.5	111.7
1872	1.09½	91.32	1.15⅜	1.08½	89.0	112.4
1873	1.12	89.28	1.19⅜	1.06⅞	87.9	113.8
1874	1.10¼	90.70	1.14⅜	1.09	89.9	111.2
1875	1.12½	88.89	1.17⅜	1.11⅜	87.0	114.9
1876	1.12⅜	88.69	1.15	1.07	89.8	111.5
1877	1.07	93.46	1.07⅞	1.02½	95.4	104.8
1878	1.02⅞	97.21	1.02⅞	1.00	99.2	100.8

These fluctuations necessarily caused great disturbances in prices. Congress at one time endeavored to check the speculation in gold by the enactment of a prohibitive law (June 17, 1864); this actually caused a rise in the premium, and the law was repealed on July 6 following.

From the period in 1867 when retirement of notes was stopped, until 1876, the Treasury, by selling the gold received from customs duties in excess of its needs, kept the premium lower than would otherwise have been the case. In all, these sales amounted to over $514,000,000, or considerably more than was necessary to redeem all the notes; but the policy of keeping the notes in existence prevailed over all efforts to have them permanently retired.

Resumption of Specie Payments.

On January 1, 1879, the Treasury, with over $114,000,000 of gold in its vaults in excess of outstanding gold certificates, began the redemption of these notes at the sub-treasury in New York as rapidly as they were presented. The redemption for that month amounted to only $1,571,725; and the entire amount redeemed (afterwards reissued) to June 30, 1906, was $646,000,000. As the notes were, after January 1, 1879, equivalent to gold, the Treasury accepted them for duties on imports without compelling the holders to obtain the coin for that purpose. The act of March 3, 1887, provided that thereafter the notes might be redeemed at the sub-treasury in San Francisco also.

The act of July 12, 1882, as already mentioned (*ante*, "Gold Certificates"), in a sense fixed the gold fund for redemption purposes at $100,000,000; and after March, 1885, this amount was considered and reported in the official

statements of the Treasury as a separate and distinct fund, held for this specific purpose.

Under the construction by the Treasury of the "parity" clause of the act of July 14, 1890 (see *post*, "Treasury Notes"), the fund was also used to redeem in gold, when demanded, the notes issued under this act and the fund consequently diminished rapidly, until in April, 1893, it fell below the $100,000,000 specified; and by January, 1894, the reserve was down to $65,650,000. Accordingly the Secretary of the Treasury, under the authority of the "Resumption Act" of 1875, which provided for the sales of either 5 per cent. ten-year bonds, 4½ per cent. fifteen-year bonds, or 4 per cent. thirty-year bonds to obtain coin, sold $50,000,000 of 5 per cent. bonds at about a 3 per cent. basis, thus replenishing the reserve. The redemption of notes continued, however, until August, reducing the gold to nearly $52,000,000. Hence in November, 1894, another issue of $50,000,000 of 5 per cent. bonds was negotiated on a basis yielding 2⅞ per cent., restoring the reserve for a short time.

By the end of January, 1895, the reserve had again fallen to a very low figure and the Secretary purchased $65,000,000 of gold with 4 per cent. bonds, restoring the reserve for several months. A fourth issue of $100,000,000 of bonds was resorted to in February, 1896, which served to maintain the reserve to the close of the fiscal year.

In all the Treasury issued $262,315,400 in bonds during this period, to obtain gold to maintain the notes at par.

The amount of gold in the Treasury in excess of the sum required to redeem gold certificates fluctuated as follows since resumption:

The Net Gold in the Treasury.

(In Millions of Dollars.)

Year	Highest.		Lowest.		Year	Highest.		Lowest	
	End of:	Am't	End of:	Am't		End of:	Am't	End of:	Am't
1879	October	157	January	117	1894	December	111	August	52
1880	December	150	July	115	1895	June	107	January	45
1881	November	173	January	148	1896	December	137	January	50
1882	February	169	December	132	1897	December	161	June	141
1883	October	157	January	126	1898	December	246	June	167
1884	January	144	July	119	1899	September	254	May	228
1885	December	148	May	116	1900	March	248	August	218
1886	December	171	January	136	1901	December	263	January	221
1887	December	209	January	168	1902	September	286	February	239
1888	March	219	October	191	1903	March	277	January	249
1889	March	198	August	181	1904	March	249	July	197
1890	May	190	September	148	1905	November	285	January	201
1891	February	150	June	118	1906	November	318	January	260
1892	March	126	July	110	1907	March	311	October	238
1893	January	108	December	66					

The act of March 14, 1900, increased the gold reserve to $150,000,000 and specifically authorized the redemption of Treasury notes of 1890 therefrom;

the fund is to be kept replenished by the use of the gold in the general fund of the Treasury, which in turn can if necessary, be replenished, if the gold in reserve falls below $100,000,000, by the sale of 3 per cent. gold bonds, payable at the pleasure of the government after one year. United States notes redeemed are to be reissued. The currency functions of the Treasury are separated from the ordinary fiscal functions.

The same act provided for the substitution of large denominations of United States notes ($10 and upwards) for the smaller ones as silver certificates of less denominations were issued, as already stated.

The demand for small denominations of paper currency, however, induced Congress to revise this by the act of March 3, 1907, under which notes of $1, $2 and $5 were again authorized to be issued in lieu of larger notes canceled.

United States Notes Issued and Outstanding, 1862-1907.

Denominations.	Issues and Reissues.	Outstanding.	
		June 30, 1897.	June 30, 1907.
$ 1	$ 188,364,160	$ 3,072,813.20	$ 1,875,388.20*
2	186,763,048	2,848,957.80	1,421,369.80*
5	593,521,760	57,475,027.00	6,620,115.00*
10	1,312,851,240	81,692,071.00	283,757,706.00*
20	528,682,400	72,923,072.00	17,566,262.00*
50	147,015,200	14,903,975.00	3,441,925.00*
100	191,714,000	24,460,100.00	6,224,250.00*
500	219,276,000	16,103,000.00	7,114,000.00
1000	414,548,000	74,177,000.00	19,640,000.00
5000†	20,000,000	15,000.00	10,000.00
10000†	40,000,000	10,000,00	10,000.00
Totals	$3,842,735,808	$347,681,016.00	$347,681,016.00
Unknown, destroyed in Chicago fire		1,000,000.00	1,000,000.00
		$346,681,016.00	$346,681,016.00

* Fractions due to fractional redemptions.
† Issued temporarily (1880-1882) during the suspension of the issue of gold certificates.

The following table shows by fiscal year periods the amounts of United States notes redeemed in gold after resumption, and of Treasury notes of 1890 when they were in use, in thousands of dollars.

Periods.	U.S. Notes (000s)	Treasury Notes. (000s)	Totals (000s)	Periods.	U.S. Notes (000s)	Treasury Notes. (000s.)	Totals (000s)
1879	7,977		7,977	1898	22,302	2,696	24,998
1880	3,781		3,781	1899	18,645	6,997	25,642
1881-1890	15,442		15,442	1900	28,637	6,961	35,598
1891	5,986		5,986	1901	23,776	447	24,223
1892	5,352	3,774	9,126	1902	17,483	1,275	18,757
1893	55,319	46,781	102,100	1903	7,155	1,113	8,267
1894	68,242	16,600	84,842	1904	11,081	474	11,555
1895	109,784	7,570	117,354	1905	11,518	341	11.858
1896	153,308	5,348	158,656	1906	11,452	193	11,645
1897	68,373	9,829	78,202	1907	12,691	101	12,792

The confidence of the people in the notes was evidently not shaken until 1893, the redemptions having been insignificant prior to that year. But in the five years following over $450,000,000 in gold was drawn upon United States notes alone; an amount much greater than the entire issue at the time was thus redeemed.

Legal Tender and Taxation.

Early in the history of the United States notes the power given by the law of 1862, making them legal tender, was contested in the courts; at first (Hepburn vs Griswold, 8 Wall. 603) the constitutionality of this portion of the law was denied by the Supreme Court; subsequently, however (Legal-Tender cases, 12 Wall. 457), this decision was reversed, and the latter decision has since then been construed as the law of the land.

The power of Congress to authorize the reissue of these notes, as provided in the act of May 31, 1878, after redemption under the resumption act, was questioned. The Supreme Court in Juillard vs. Greenman (110 U. S., 404), held that Congress had the power; and further that Congress had the power to issue notes and declare them a legal tender, in time of peace as well as in time of war.

It should be added that the decision of the Supreme Court declaring the legal-tender act constitutional, has been seriously questioned by many able jurists. It is argued that the framers of the Constitution, having just experienced the evils of the depreciated Continental Currency (*post*) were clearly opposed to giving any such power to Congress; and an examination of the debates of the constitutional convention of 1787 tends to verify this. The question had been broached in Congress upon more than one occasion prior to 1860, and Webster unqualifiedly declared against the constitutionality.

Unfortunately, also, the decision (in Legal-tender cases), reversed a previous one wherein Chief Justice Chase, and a majority of the Court, held with Webster. In the interval between the decisions, the Court was "reconstructed" by an act of Congress, and the new appointees were known to be favorable to the reversal, which was accomplished by a vote of 5 to 4.

A further question arose as to the power to tax United States notes under state and municipal laws, the act of 1862 having declared all bonds and other securities of the United States exempt from such taxation; the Supreme Court held that the notes were "obligations" and to be classed as "securities," hence not subject to such taxation. (Bank vs. Supervisors, 7 Wall. 26.)

The act of August 15, 1894, repealed the laws exempting notes from taxation.

Treasury Notes of 1890.

The act of July 14, 1890 (sometimes designated the "Sherman Act"), directed the Secretary of the Treasury to purchase monthly 4,500,000 ounces

of fine silver bullion or so much thereof as might be offered, at the market rate, not to exceed $1 for 371¼ grains of fine silver. (This, it will be recalled, is the weight of the pure silver in the standard dollar.) To pay for the bullion so purchased, Treasury notes in denominations of not less than $1 nor more than $1,000, were to be issued.

These notes were made redeemable *in coin* at the Treasury or any subtreasury, and might be reissued; were also made a legal tender for customs duties and all debts except when otherwise expressly stipulated, and might be counted as part of the reserve of any national bank holding them.

The redemption provided for might be in gold or silver coin at the discretion of the Secretary of the Treasury, and, to provide silver for the purpose, 2,000,000 ounces were to be coined monthly until July 1, 1891, into dollars authorized by the act of February 28, 1878; thereafter such dollars to be coined only when necessary to provide for such redemptions; the seignorage arising from the coinage to accrue to the general fund of the Treasury.

So much of the act of 1878 requiring the purchase and coinage of silver was repealed.

A specific limitation of the amount of notes to be issued under the act was as follows: "No greater nor less amount . . . shall be outstanding at any time than the cost of the silver bullion, and the standard silver dollars coined therefrom, then held in the Treasury, purchased by such notes." Thus if the bullion purchased cost $20,000,000 and $10,000,000 worth thereof were coined into dollars, producing, owing to the low price of silver, $13,000,000 of such dollars, $10,000,000 of the coin and the remaining $10,000,000 worth of bullion must be held for the notes issued, the balance of $3,000,000 being the profit or seignorage accruing to the Treasury; and on such dollars, when in the Treasury, silver certificates were issued under the act of February 28, 1878.

An important clause of the act of 1890 was the one declaring it to be "the established policy of the United States to maintain the two metals (gold and silver) on a *parity* with each other, upon the present legal ratio (15.988 to 1) or such ratio as may be provided by law."

In order to accomplish this, it became necessary, when Treasury notes were presented for redemption, to pay on demand either gold or silver as the *holder* might prefer; a refusal to do so would have made the notes silver notes. Congress having provided no special gold fund for this purpose, the available gold in the Treasury was used; occasion having soon thereafter arisen for large exportation of gold, this fund was drawn upon very heavily and seriously decreased, as has been shown before (*page 24*). The amount of Treasury notes redeemed in gold is stated on page 25.

The notes so redeemed were reissued, as were also such as were redeemed in silver dollars up to August, 1893. Subsequent to the latter date the notes redeemed in silver were canceled and destroyed.

By the act of November 1, 1893, so much of the law of 1890 directing the purchasing of silver and the issue of notes, was repealed.

The act of June 13, 1898, directed the coinage of not less than $1,500,000

in dollars monthly, and the act of March 14, 1900, authorized the use of part of the bullion in the coinage of subsidiary coin.

The last-mentioned act also made the notes specifically redeemable out of the gold reserve, and provided that as dollars and smaller pieces were coined from the bullion, notes were to be canceled. Thus by 1905 all the bullion was coined and all but a few of the notes redeemed.

The following statement shows the operations under the law of 1890 and the amendments thereto, from the date it went into effect (August 13, 1890) until June 30, 1906:

Silver bullion purchased	oz. 168,674,682,	cost	$155,931,002
Coined into dollars	oz. 144,653,962,	cost	134,192,502
Coined into subsidiary pieces	oz. 23,957,149,	cost	21,675,964
Loss in operations	oz. 63,571,	cost	62,536

Average cost per oz. was 92.44 cts.

The production was in dollars	$187,027,435
In subsidiary coin	33,118,575
Total	$220,146,010
Treasury notes issued (see cost, above)	155,931,002
Showing a profit	$ 64,215,008

As the seignorage on subsidiary coinage is somewhat greater than that on dollars, the actual return of profit is as follows:

On the dollar coinage	$52,834,843
On the subsidary coinage	11,442,611

Treasury Notes Issued and Outstanding.

Denominations.	Issues and Reissues.	Outstanding.	
		June 30, 1897.	June 30, 1907.
$ 1	$ 64,704,000	$11,785,875	$ 462,987
2	49,808,000	8,930,370	324,298
5	120,740,000	36,175,065	1,355,185
10	104,680,000	32,689,290	2,190,410
20	35,760,000	9,657,880	1,098,070
50	1,175,000	320,700	26,650
100	18,000,000	3,337,100	312,400
1000	52,568,000	11,971,000	218,000
Totals	$447,435,000	$114,867,280	$5,988,000

No issues since 1900. No $500 notes of this class issued.

National Bank Notes.

After the suspension of specie payments by the state banks in December, 1861, a *national banking* system was proposed, but the bill providing therefor was laid aside; it was finally passed on February 25, 1863; this law was found

defective in many respects and an amended or substitute act was passed June 3, 1864.

The life of each association was limited to twenty years. The minimum capital was fixed at $50,000; circulating notes could be issued only upon a deposit of United States bonds to the amount of not less than $30,000, and not less than one-third of the capital stock paid in, whereupon notes to an amount not exceeding 90 per cent. of the par value of the bonds, in blank, but duly countersigned by the Treasury officers (certifying that the bonds are deposited in the Treasury) were to be furnished the banks for signature and issue. No bank could receive and issue notes in excess of 90 per cent. of its capital stock. The aggregate issue was limited to $300,000,000. The denominations of notes authorized were $1, $2, $5, $10, $20, $50, $100, $500 and $1,000; but only one-sixth of the issue could be in denominations under $5, and after the resumption of specie payments no such small notes were to be issued.

The notes were not made legal tender, but receivable at par in payment of dues to the United States, except duties on imports, and for payments by the United States except interest on public debt or redemption of national currency; and they were receivable by any national bank at par for debts owing to it.

The bonds were provided as security for the ultimate redemption of the notes, but each bank was obliged to redeem its own notes at its counter on demand in "lawful money," *i. e.*, legal tender; but it might, in addition, designate another national bank in any of the reserve cities specified by the act, as its redemption agent. Moreover the shareholders were made liable to double the amount of stock held by them, for all debts of the bank.

To provide for such redemptions and reserves, an amount of lawful money equal to 15 per cent. of the notes in circulation and of deposits was to be held either in the bank, or to the extent of 60 per cent. with its reserve or redemption agent; and the national banks in the specified cities were to hold as much as 25 per cent. of their circulation and deposits in lawful money, half of which might be in New York city national banks acting as the redemption or reserve agents of banks in other "reserve cities." Those in New York city were to hold 25 per cent., all in cash.

Lawful money meant legal tender; at this time it was practically confined to United States notes, but after resumption of specie payments, gold coin and silver dollars were of course also included.

Until 1887 New York was the only "central reserve" city; in that year Chicago and St. Louis became such, and the national banks there also hold 25 per cent. full cash reserves.

Notes of failed banks to be redeemed by the Treasurer from proceeds of the sales of bonds. Worn or mutilated notes to be replaced by the Treasury, the cost of replacing them being paid by the banks.

Provision was also made for protesting notes when redemption was refused, and for placing the bank in a receiver's hands for such refusal to redeem.

The act imposed a tax of one per cent. per annum on the average amount

of circulation, determined semi-annually, and of one-half per cent. per annum on deposits and on capital stock beyond that invested in bonds of the United States. The tax on deposits and capital was repealed by act of March 3, 1883, but that on circulation remained until modified by the act of March 14, 1900.

During the Spanish war (1898), capital and surplus of all banks were taxed; this was abrogated soon after the close of the war.

National gold banks were authorized by the bank act of 1864 (for the Pacific slope); their notes were to be payable in gold, none to be issued in denominations less than $5; limited in each case to 80 per cent. of the par value of the bonds deposited, and the capital of no bank to exceed $1,000,000. The restriction as to capital was repealed January 10, 1875. The act of February 14, 1880, authorized the conversion of these banks into ordinary national banks, the need for distinct organizations having passed when resumption of specie payments became assured.

The act of March 3, 1865, limited the amount of the note issue of banks with a capital in excess of $500,000 to 80 per cent. of the capital; in excess of $1,000,000 to 75 per cent., and over $3,000,000 to 60 per cent.; it also provided that the aggregate amount authorized to be issued be apportioned to the banks in states and territories, $150,000,000 according to population, and the remainder according to existing banking capital, resources and business.

The act of July 12, 1870, increased the authorized issue by $54,000,000, to be apportioned, by preference, to states or territories having less than their quota, according to the census; no banks organized after that date could issue more than $500,000 in notes; and the Treasury was directed to equalize the circulation by apportionment after (but not before) the issue of the above additional amount; reductions might from time to time be made in the amount issued by banks in states having an excess. Under the act of June 20, 1874, this equalization was to take place at once, and banks were to be induced to deposit lawful money with the Treasury (withdrawing their bonds), to reduce circulation, not to exceed in all $55,000,000, provided that the amount of bonds on deposit for any one bank were not reduced below $50,000. The additional issue was increased to $55,000,000, to be apportioned as before provided. The act of January 14, 1875 (resumption act), repealed all provisions limiting the increase or decrease of national-bank circulation, apportionment, etc.

The act of June 20, 1874, also abolished the requirement of a lawful money reserve for the redemption of notes and the provision for redemption agents. It continued the requirement of reserve on account of deposits, and compelled the banks to keep on hand in the Treasury lawful money for the current redemption of notes, equal to 5 per cent. of their circulation, such amount to be counted as part of the reserve for deposits; the Treasury became thus the redeeming agent, the expense being borne by the banks. They were not, however, relieved of the duty of redeeming their own notes upon demand.

The charter limit of many of the banks would have expired in 1883 and 1884; accordingly the act of July 12, 1882, provided for the extension of the charters for another period of twenty years. It also provided that banks hav-

ing a capital of $150,000 or less need not have more than one-fourth of the amount of such capital on deposit in bonds to secure circulation, thus reducing the minimum to $12,500, the minimum capital remaining at $50,000 as heretofore; the reduction of circulation consequent upon this provision and for other reasons, was limited to $3,000,000 per month; and a bank reducing its circulation was prohibited from again increasing it within six months. The same act declared gold certificates and silver certificates available for bank reserves; they are hence included as "lawful money" although not legal tender.

For a long period after 1882 little was done to encourage the increase of national-bank circulation. The maximum was reached in the year named when it rose to $358,742,034; it steadily declined to 1891 when the low record of $167,550,906 was made. This was directly due to the decrease in the volume of the bonded debt of the United States and the consequent enhancement in the price of bonds. The premium compelled the investment of so large an amount of money to obtain the required bonds, upon which only 90 per cent. of the par could be issued in notes and loaned, that the money if loaned out in the first instance would produce a larger income when the tax and other expenses on circulation were considered.

The following table from the report of the Comptroller of the Currency illustrates the conditions in 1895 (October) with each class of active bonds, on the basis of $100,000 bonds and $90,000 circulation:

Items.	Old Four Per Cents.	New Four Per Cents.	Five Per Cents.
Market price	111.48	121.75	111.75
Receipts.			
Interest at 6 per cent. on notes issued	$5,400.00	$5,400.00	$5,400.00
Interest on bonds	4,000.00	4,000.00	5,000.00
Total	$9,400.00	$9,400.00	$10,400.00
Expenses.			
Tax of 1 per cent. on notes	$900.00	$900.00	$900.00
Cost of redemption	45.00	45.00	45.00
Express charges	3.00	3.00	3.00
Plates	7.50	7.50	7.50
Agents' fees	7.00	7.00	7.00
Sinking fund account premium	686.60	277.13	1,392.33
Total	$1,649.10	$1,239.63	$2,354.83
Net receipts	$7,750.90	$8,160.37	$8,045.17
Six per cent. on cost of bonds	6,689.02	7,305.16	6,885.20
Profit on circulation	$1,061.88	$855.21	$1,159.97

The loss of interest on the 5 per cent. redemption fund is not included, since the amount in the fund is counted as part of the bank's reserve.

It will be observed that the table assumes the most favorable conditions, and the quoted prices of the bonds are not by any means at the highest; moreover when money rules at higher rates the profits on circulation are considerably reduced.

In other words, if the funds of a bank having $111,483.70 to invest were loaned out originally at 8 per cent., instead of being used in organizing a bank under the national system, the apparent loss would, on the face of the transaction, be barely ½ per cent., and the institution would have been free from the additional restrictions of the national-bank act.

From 1865 to 1877 the government issued only 5 and 6 per cent. bonds, and the volume was in excess of $1,750,000,000; the market price of these issues ranged from $89 to $125 in currency.

From 1877 to 1881, 4½ and 4 per cent. bonds took the place of most of the 6 per cents., and a portion was continued at 3½ per cent., as were also the remaining 5 per cents.

From 1882 to 1886, 3 per cents. replaced those bearing 3½ per cent., and during the greater part of this period such bonds could be purchased at par, or at a slight premium; while the 4 per cents. were quoted at a premium of from 17 to 29 per cent.. which placed them beyond the reach of banks. There were in 1882 still over $1,500,000,000 of bonds in the aggregate; but by 1886 the amount had fallen below $1,200,000,000.

Between 1886 and 1893, nearly one-third of the 4 per cents. were retired, and all but $25,000,000 of the 4½ per cents. were redeemed, this small amount being continued at 2 per cent. In 1894-1896 there were issued to procure gold, $100,000.000 of 5 per cents. and $162,300,000 4 per cents., raising the total to $900,000,000, bringing, at their usual market price, an income of less than 3 per cent.

In 1898 the Spanish War Loan increased the debt by $200,000,000 in 3 per cents., which afforded quite a stimulus to bank circulation; but it was not until the act of March 14, 1900, became operative that material results followed.

This law provided for the funding of the bonded debt into 2 per cent. thirty-year bonds upon a 2¼ per cent. investment basis, and that when the new bonds were used to secure circulation the tax thereon was to be only one-half the former rate, (in other words ½ of one per cent. per annum); it also allowed the issue of notes to the par value of bonds, instead of 90 per cent.; this figures out a fair profit upon note-issues, estimated in 1907 at about 1 per cent. minimum.

This measure proved very acceptable to the banks, and the greater part of the public debt was converted into 2 per cents; the market price of the bonds has been as high as 107, under the stimulus of demand from banks; this gives the United States an artificially high credit status.

The same act also provided for small banks, capital $25,000, in towns of 3,000 people or less; that banks retiring circulation were to be allowed to again increase the same without the restriction imposed by the act of 1882; and that not more than one-third of the notes were to be of the $5 denomination.

The following table shows, in millions of dollars, the amounts of bonds outstanding at the end of each fiscal year from 1866.

PUBLIC DEBT AT END OF EACH FISCAL YEAR.

1866	1,213	1882	1,514	1898	878
1867	1,634	1883	1,389	1899	1,047
1868	2,092	1884	1,277	1900	1,025
1869	2,166	1885	1,246	1901	988
1870	2,051	1886	1,196	1902	932
1871	1,953	1887	1,072	1903	915
1872	1,845	1888	1,001	1904	896
1873	1,760	1889	880	1905	896
1874	1,789	1890	776	1906	895
1875	1,773	1891	675	1907	895
1876	1,761	1892	649		
1877	1,761	1893	649		
1878	1,845	1894	699		
1879	1,952	1895	780		
1880	1,775	1896	900		
1881	1,690	1897	900		

Note.—These figures include bonds issued in aid of Pacific Railroads up to 1898.

The untoward conditions referred to did not prevent the growth of banks *in number;* but the volume of notes was reduced. Many banks took out only the minimum amount of circulation and a few kept bonds on deposit without issuing notes. The law of 1900 gave the impulse to expansion, particularly through small banks in sparsely populated sections, thus giving needed facilities there.

The following table shows the growth:

Years. (Oct. 1)	No. of Banks.	Capital. (Millions.)	Notes. (Millions.)	Average Capital.	Average Notes.
1863	66	7.2	.....	$109,900	.....
1873	1976	491.0	339.1	248,532	$172,115
1883	2501	509.7	310.5	203,798	124,150
1893	3781	678.5	183.0	179,185	48,399
1900	3871	630.3	283.9	162,568	73,340
1903	5042	753.7	375.0	149,484	74,375
1906	6137	835.1	518.0	136,076	84,406
1907	6650	909.3	562.7	135,233	84,616

Of the increase in the number of banks since 1900 there were 1637 with capital of $50,000 or less. State banks to the number of 426 were converted into nationals.

The amount of each denomination of national bank notes outstanding at several dates is given in the next table. In 1907 there were included $75,000 national-bank gold notes, the amount still unredeemed of this class, out of a total issue of $3,465,240.

The lowest amount of notes out at the close of any fiscal year was $167,550,906 in 1891; the highest was in 1907 as given. These amounts include the notes out secured by "lawful money" deposits, explained on another page.

National Bank Notes Issued and Outstanding.

Denominations.	Issues and Reissues to Oct. 31, 1906.	Outstanding on June 30.		
		1896.	1906.	1907.
$ 1	$ 23,169,677	$ 353,392	$ 344,352	$ 344,249
2	15,495,038	171,238	164,806	164,708
5	1,006,305,860	70,959,130	76,889,175	113,826,705
10	1,240,988,000	69,223,410	240,007,710	247,378,750
20	805,831,300	51,447,180	181,097,620	183,971,240
50	167,811,650	11,137,100	19,934,800	18,239,300
100	287,084,700	22,085,700	42,515,600	39,705,100
500	11,947,000	122,000	94,500	93,000
1000	7,379,000	29,370	24,000	24,000
Totals	$3,566,012,225	$225,528,520	$561,072,563*	$603,747,052*

* Exclusive of fractional parts of notes partially redeemed.

The amount of notes outstanding at the close of each fiscal year (June 30), is shown in the chapter dealing with the Volume of Money.

The banks could manifestly issue a very much larger amount of $5 notes, which would prove quite useful.

The financial crisis late in 1907 caused a marked increase of bank note issues, the total reaching $690,130,895.

The course of net earnings and dividends of national banks is shown below, the ratio of earnings being calculated upon capital and surplus, representing all of the banks' own funds; dividends are shown by ratio upon both capital and surplus and capital alone; amounts are in millions of dollars, years ending September. Reports of earnings and dividends were not required until 1869.

Year.	Capital.	Surplus.	Both.	Earnings.	Dividends.	Earnings to Capital and Surplus.	Divdends to Capital and Surplus	Dividends to Capital.
						%	%	%
1873	473	110	583	62	49	10.7	8.4	10.3
1883	479	136	615	53	41	8.6	6.7	8.6
1893	683	242	925	68	51	7.4	5.5	7.5
1903	689	324	1013	103	60	10.1	5.9	8.7
1904	746	373	1119	116	74	10.4	6.6	9.9
1905	768	402	1170	105	71	9.0	6.1	9.2
1906	779	418	1197	114	81	9.5	6.7	10.4

For the entire period since 1869 the net earnings have been 2313 millions, of which 1781 millions have been distributed as dividends, an average rate of 8.4%. A substantial sum was added to surplus. Comparing profits and dividends by groups of states, we have this result:

(Figures represent per cent.)

Year.	Earnings to Capital and Surplus.				Dividends to Capital.			
	New England	Middle.	Southern.	Western.	New England	Middle.	Southern.	Western.
1893	10.5	9.7	12.5	12.7	10.0	10.0	10.4	11.3
1883	6.3	8.4	10.4	12.0	7.0	8.4	8.1	11.6
1873	5.5	7.7	7.3	8.4	5.8	8.3	8.0	7.9

The geographical division has been changed recently with the following result:

Year.	New England.	Eastern.	Southern.	Middle.	Western.	Pacific.	New England.	Eastern.	Southern.	Middle.	Western.	Pacific.
1903	6.7	10.5	11.6	10.3	14.2	14.2	6.5	9.0	9.5	8.9	12.1	10.2
1904	6.0	10.3	11.2	9.6	12.9	12.9	6.4	11.4	9.5	9.6	12.3	10.7
1905	5.7	8.6	11.3	8.8	13.3	12.8	6.5	10.1	10.0	9.4	10.9	10.3
1906	7.6	10.1	11.7	9.7	14.5	13.7	6.6	12.4	13.1	9.6	12.5	15.5

The earnings clearly indicate the higher interest charges in the less developed sections. Some remarkable results appear in the dividend return for 1906; Pittsburg showed 18%, New Orleans 53%, Los Angeles 41%, Houston 31%; Louisiana outside New Orleans 33%, Montana 23%, Washington (State) 27%. Per contra, the ratio was very low in some of the other states and cities.

The relation between dividends and earnings is not, in fact, a fair criterion; for it frequently occurs that banks divide only a part of their profits for a time; sometimes they make no division; and then again the accumulated undivided profits are used to declare large dividends. This was the case in a number of instances in 1906.

The tax paid by national banks has produced $177,381,344 revenue to the government; circulation paid to June 30, 1907, $101,536,976; capital and deposits (abrogated in 1883), $68,795,955; and capital and surplus under the War Revenue Act of 1898, produced $7,048,413. In addition the sums paid for expense of issue and redemption of notes, examination of securities, plates for printing, etc., aggregated $12,285,819. The average cost of redemption of notes has been about 99 cents per $1,000 of notes redeemed.

The number of national banks chartered from the beginning of the system to October, 1907, was 8,937; of these 1,834 liquidated voluntarily and 453 failed. Those failed, which have finally been settled, paid out including offsets, an average of 80.83% of their debts; 66 are still in receivers' hands. More than one-third of the insolvent banks paid their debts in full.

The data relating to the settled cases are:

Claims proved	$128,847,308
Claims paid	95,815,643
The offsets amounted to	$ 43,433,718
Assessed on stockholders	17,616,404

Taking all the failed banks, including those not yet settled, we have the following:

Nominal assets at failure	$299,547,480	
Claims proved	161,307,663	
Collected	146,509,297	
Offsets	22,602,597	
Assessments paid by shareholders	20,575,420	
Collections and assessments brought a total of		$167,084,717
Creditors received	$117,140,338	
Debts of banks paid	32,769,622	
Expenses	12,460,605	
Returned to shareholders	2,826,222	
Balance in course of settlement	1,887,930	

The cost of settlement was thus not quite 7½% upon the actual amount received, and less than 7% if offsets are included.

The notes of the banks were of course paid in full from the proceeds of sales of bonds held to secure them. The average annual amount of notes of failed banks is less than $630,000, which is less than ¼ of one per cent. upon the average annual amount of notes outstanding; a very pertinent fact.

Respecting the risk of deposits the following data are presented:

Average annual deposits of national banks	$1,529,339,311
Claims proved by depositors of failed banks	161,307,663
Losses to creditors	47,911,583
Average annual loss	1,114,223

Ratio of average loss to average deposits .073 per cent.

This indicates the risk which a plan of insuring deposits would have to consider; only 73 thousandths of one per cent. is the net result.

National Bank Depositaries.

The national bank act provided that upon a deposit of bonds to secure the same, public moneys received from sources other than duties on imports (then payable in coin), might be placed in national banks. For many years the practice was to require government bonds as such security, but in recent years other high-class bonds have been accepted. In March, 1907, Congress authorized the deposit of any public moneys in this manner.

This has proved a great convenience to the government in localities where

there are no sub-treasuries; the funds are absolutely safe and are also kept in use instead of being locked up in the Treasury. About 200 banks are used in this manner, but many more have in recent years been created special depositaries merely to keep the surplus of the Treasury in use, which means practically loaning government funds without interest. The total number of depositaries on June 30, 1897, was 168; in 1907 it was 1,255. The amounts of money held for a series of years is shown elsewhere.

National Bank Redemption Fund.

The fund of moneys deposited under the banking laws, to retire the notes of banks reducing circulation, or of such banks as went into voluntary or involuntary liquidation, grew to considerable proportions, as will be seen by the following table. In order not to have such an amount of money kept out of circulation, Congress, by the act of July 14, 1890, provided that the amount be used by the Treasury, and the notes be redeemed, when presented, out of the general fund of the Treasury against which it should appear as a charge and be reported monthly in the statement of the debt.

The balances of "lawful money" deposits of national banks failed, liquidating or reducing circulation, at the close of each fiscal year, were as follows:

1867.....	.....	1882.....	$37,056,729	1897.....	$24,458,637
1868.....	$ 126,849	1883.....	36,157,910	1898.....	30,493,147
1869.....	434,160	1884.....	39,368,121	1899.....	35,817,381
1870.....	1,017,565	1885.....	38,596,332	1900.....	35,147,878
1871.....	2,727,108	1886.....	60,248,705	1901.....	29,404,309
1872.....	2,826,059	1887.....	97,992,918	1902.....	42,071,969
1873.....	1,917,602	1888.....	91,952,843	1903.....	40,053,308
1874.....	3,827,612	1889.....	78,051,136	1904.....	35,526,542
1875.....	18,203,667	1890.....	55,619,359	1905.....	32,227,102
1876.....	25,972,360	1891.....	40,018,392	1906.....	45,574,178
1877.....	12,991,361	1892.....	26,763,509	1907.....	47,658,804
1878.....	9,797,513	1893.....	20,663,437		
1879.....	11,596,061	1894.....	26,371,685		
1880.....	19,337,621	1895.....	25,359,489		
1881.....	33,146,858	1896.....	20,102,022		

These amounts represent notes in circulation not secured by bonds, but by cash deposited in the Treasury, and hence they are obligations of the United States. In treating of bank circulation statistically this fact must be borne in mind; in bank returns only the amount actually secured by bonds is reported; in the returns of money in circulation the above amounts are always included.

The amount of each class of notes outstanding at the end of the fiscal year 1907 was:

Of failed banks.....	$1,441,776
Of banks liquidated voluntarily.....	34,871,603
Of banks reducing circulation.....	11,345,425

Below is given a comparative statement in detail of all the national banks in 1896 and 1907, in millions of dollars. The increase in total resources has been over 152% in the period.

RESOURCES.	July, 1896.	May, 1907.	LIABILITIES.	July, 1896.	May, 1907.
Loans and overdrafts	1972	4664	Capital stock	651	884
Bonds with Treasury	243	745	Surplus and profits	332	720
Other bonds, etc.	203	686	Notes in circulation	199	548
Due from Banks	349	1130	Due to Banks	454	1686
Due from Treasurer U. S.	2	5	Individual deposits	1668	4323
Checks	90	306	U. S. deposits	16	181
Cash: Gold and certificates	162	423	Rediscounts	12	9
Silver and certificates	42	108	Bills payable	16	30
U. S. notes and certificates	140	161	Other liabilities	6	95
National Bank notes	10	28			
Minor coin	1	2			
Note redemption fund	17	27			
Real estate and other assets	123	191			
Totals	3354	8476	Totals	3354	8476

LEGAL TENDER IN THE UNITED STATES

I.—COINS.

CONSTITUTION.—Art. I., Sec. 8.—The Congress shall have power to coin money, regulate the value thereof, and of foreign coin. Art. I., Sec. 10.—No State shall * * * make anything but gold and silver coin a tender in payment of debts.

STATUTES: *United States Coins.*

1792. Act of April 2, Section 16. All the gold and silver coins which shall have been struck at and issued from the said mint, shall be a lawful tender in all payments whatsoever, those of full weight according to the respective values hereinbefore declared [*nominal value*] and those of less than full weight at values proportional to their respective weights.

Gold and Silver Coins.

1834. Act of June 28, Sec. 1. *Changes the weights of gold coins, and repeats the language above in relation to these.*

Sec. 3. *Provides that gold coins of the former standard* "shall be receivable in all payments at the rate of 94.8 cents per pennyweight."

Gold coins

1837. Act of January 18, Sec. 9. *Changes the weights of silver coins and provides* "that dollars, half-dollars, quarter dollars, dimes and half-dimes, shall be legal tenders of payment according to their nominal value, for any sums whatever."

Silver coins.

Sec. 10 *repeats weights of gold coins provided for in act of 1834 and provides* "that for all sums whatever, the eagle shall be a legal tender of payment for ten dollars, the half-eagle for five dollars and the quarter-eagle for two and one-half dollars."

Gold coins.

Sec. 11 *provides that the silver coins of the former standard* "shall continue to be legal tenders of payments for their nominal values, on the same terms as if they were of the coinage provided for in this act."

Silver coins.

1849. Act of March 3. *Provides for the coinage of gold pieces of $20 and of $1 and* Sec. 2, "that for all sums whatever, the double eagle shall be a legal tender for twenty dollars and the gold dollar shall be a legal tender for one dollar."

Double eagles and dollars.

1851. Act of March 3. Sec. 11, *Provides for a silver 3-cent piece* "and that it shall be a legal tender in payment of debts for all sums of thirty cents or under."

Silver 3-cent piece.

1853. Act of February 21. *Changes the weight of fractional silver coins,* and

Fractional silver coin.

Sec. 2, That the silver coins issued in conformity with the above section shall be legal tenders in payment of debts for all sums not exceeding five dollars.

Three-dollar gold piece.

Sec. 7. *Provides for a three-dollar gold piece and makes the provisions of the act of March 3, 1849, applicable thereto.*

1864. Act of April 22. *Provides for a 2-cent piece, changes weight of 1-cent piece* and

Minor coin.

Sec. 4. That said coins shall be a legal tender in any payment, the one-cent coin to the amount of ten cents and the two-cent coin to the amount of twenty cents.

(*This is the first act relative to the legal tender power of minor coin.*)

1865. Act of March 3. *Provides for a nickel 3-cent piece, and*

3-cent nickel.

Sec. 3. That the said coin shall be a legal tender in any payment to the amount of sixty cents.

1 and 2 cent pieces.

Sec. 6. That the one and two-cent coins of the United States shall not be a legal tender for any payment exceeding four cents in amount.

1866. Act of May 16. *Provides for 5-cent nickel piece and*

5-cent nickel.

Sec. 3. That said coin shall be a legal tender in any payment to the amount of one dollar.

1873. Act of February 12. Sec. 14. *Repeats preceding legislation as to weight of gold coins and* "which coins shall be a legal tender in all payments at their nominal value when not below the standard weight and limit of tolerance provided in this act for the single

Gold coins.

piece, and when reduced in weight below such standard and tolerance, shall be a legal tender at valuation in proportion to their actual weight; and any gold coin of the United States, if reduced in weight by natural abrasion not more than one-half of one per centum below the standard weight prescribed by law,

Abraded gold coins

after a circulation of twenty years, as shown by its date of coinage, and at a ratable proportion for any period less than twenty years, shall be received at their nominal value by the United States Treasury and its offices. * * *"

Silver coins.

Sec. 15. *Provides for coinage of trade dollars, and fractional silver pieces* (*but no dollars*), "and said coins shall be a legal tender at their nominal value for any amount not exceeding five dollars in any one payment."

Minor coins.

Section 16. *Provides for minor coins,* "which coins shall be a legal tender at their nominal value for any amount not exceeding twenty-five cents in any one payment."

Revised Statutes. 1874. Act of June 22.

Sec. 3585. The gold coins of the United States shall be a legal tender in all payments at their nominal value when not

Gold coins. below the standard weight and limit of tolerance provided by law for the single piece, and when reduced in weight below such standard and tolerance, shall be a legal tender at valuation in proportion to their actual weight.

Silver coins. Sec. 3586. The silver coins of the United States shall be a legal tender at their nominal value for any amount not exceeding five dollars in any one payment.

Minor coins. Sec. 3587. The minor coins of the United States shall be a legal tender, at their nominal value for any amount, not exceeding twenty-five cents in any one payment.

NOTE.—The Revised Statutes provide that all acts of Congress passed prior to December 1, 1873, any portion of which is embraced in the revision, are repealed.

1875. Act of March 3. *Provides for coinage of 20-cent silver piece, and*

20-cent piece. Sec. 2. That the twenty-cent piece shall be a legal tender at its nominal value for any amount not exceeding five dollars in any one payment.

1876. Joint Resolution of January 22, Sec. 2. That the trade dollar shall not Trade dollar. hereafter be a legal tender.

1878. Act of February 28, Sec. 1. *Provides for coinage of silver dollar of 1837, and* * * * "which coins together with all silver dollars here- Standard silver dollar. tofore coined by the United States, of like weight and fineness, shall be a legal tender at their nominal value, for all debts and dues, public and private, except where otherwise expressly stipulated in the contract."

1879. Act of January 9, Sec. 3. That the present silver coins of smaller denominations than one dollar shall hereafter be a legal tender in all Fractional silver Coin. sums not exceeding ten dollars, in full payment of all dues, public and private.

STATUTES: *Foreign Coins.*

1793. Act of February 9. Sec. 1. From and after the first day of July next, foreign gold and silver coins shall pass current as money within Gold coins. the United States and be a legal tender for the payment of all debts and demands at the several and respective rates following and not otherwise, viz.:

Of Great Britain and Portugal of their present standard at the rate of 100 cents for every 27 grains of the actual weight thereof.

Of France, Spain and the dominions of Spain, of their present standard at the rate of 100 cents for every 27.4 grains of the actual weight thereof.

Silver coins. Spanish milled dollars at the rate of 100 cents for each dollar the actual weight whereof shall not be less than 17 pennyweights, 7 grains, and in proportion for parts of a dollar. Crowns of France at the rate of 110 cents for each crown the

actual weight whereof shall not be less than 18 pennyweights 17 grains, and in proportion for parts of a crown.

Proviso. But no foreign coin that may have been or shall be issued subsequently to the first day of January, 1792, shall be a tender, as aforesaid, until samples thereof shall have been found, by assay, at the mint of the United States, to be conformable to the respective standards required, and proclamation thereof shall have been made by the President of the United States.

Sec. 2. At the expiration of three years next ensuing the time when the coinage of gold and silver, agreeably to the act [*establishing the mint*] * * * shall commence * * * all foreign gold coins and all foreign silver coins, except Spanish milled dollars and parts of such dollars shall cease to be a legal tender aforesaid.

Limited to three years.

1798. Act of February 1. *Suspends the second section of the preceding act for three years from January 1, 1798, and thus continues legal tender power of foreign coins named.*

1806. Act of April 10. *Repeats the first section of the act of 1793 and continues the legal tender power of foreign coins for three years.*

1816. Act of April 29. *Provides that for three years and no longer foreign coins shall be legal tender at rates:*

Gold coins. Of Great Britain and Portugal of present standard at 100 cents for every 77* grains or 88 8-9 cents per pennyweight.

Of France, 100 cents for every 27½ grains or 87¼ cents per pennyweight.

Of Spain, 100 cents for every 28½ grains or 84 cents per pennyweight.

Silver coins. Crowns of France at 117 cents per ounce or 110 cents for each crown weighing 18 pennyweights 17 grains.

Five-franc pieces at 116 cents per ounce or 93.3 cents for each piece weighing 16 pennyweights 2 grains.

1819. Act of March 3. *Continues provisions of preceding act, as to gold coin, until November 1, 1819; and as to silver coins to April 29, 1821.*

1821. Act of March 3. *Continues same provisions as to silver coins only to April 29, 1823.*

1823. Act of March 3. *Continues same provisions as to silver coins to March 4, 1827.*

1823. Act of March 3. *Provides that the gold coins named in the act of 1816, above, shall be accepted in payment for public lands, at the rates fixed by said act.*

1834. Act of June 25. The following silver coins shall be of legal value, and shall pass current as money within the United States, by tale, for the payment of all debts and demands at the rate of 100 cents the dollar, that is to say the dollars of Mexico, Peru,

* Evidently meant for 27 grains.

Silver coins.

Chile and Central America, of not less weight than 415 grains each, and those re-stamped in Brazil of the like weight, of not less fineness than 10 ounces 15 pennyweights of pure silver, in the Troy pound of 12 ounces standard silver; and the five-franc piece of France when of not less fineness than 10 ounces 16 pennyweights in 12 ounces Troy weight of standard silver, and weighing not less than 384 grains, at the rate of 93 cents each.

1834. Act of June 28. The following gold coins shall pass as current as money within the United States, and be receivable in all payments, by weight, in payment of all debts and demands, at the rates following, that is to say: the gold coins of Great Britain, Portugal and Brazil of not less than 22 carats fine at the rate of 94.8 cents per pennyweight; the gold coins of France .9 fine at the rate of 93.1 cents per pennyweight; and the gold coins of Spain, Mexico and Colombia, of the fineness of 20 carats 3 7-16 grains, at the rate of 89.9 cents per pennyweight.

Gold coins.

1843. Act of March 3, Sec. 1. *Modified preceding so as to admit gold coins of* Great Britain, 915½ thousandths fine at 94.6 cents per pennyweight, and those of France, 899 thousandths fine at 92.9 cents per pennyweight.

Gold coins.

Sec. 2. *Modifies act of June 25, 1834, so as to admit the* Spanish pillar dollars, and the dollars of Mexico, Peru and Bolivia of not less than 897 thousandths in fineness and 415 grains in weight, at 100 cents each; five-franc pieces of France of not less than 900 thousandths in fineness and 384 grains in weight, at 93 cents each.

Silver coins.

1857. Act of February 21, Sec. 1. The pieces commonly known as the quarter, eighth and sixteenth of the Spanish pillar dollar, and of the Mexican dollars, shall be receivable at the Treasury of the United States, and its several offices, and at the several post-offices and land offices, at the rates of valuation following—that is to say, the fourth of a dollar, or piece of two reals at twenty cents; the eighth of a dollar, or piece of one real, at ten cents; and the sixteenth of a dollar or half real at five cents.

Fractional Spanish and Mexican silver coins.

Sec. 2 *provides that these pieces shall not be paid out again but recoined.*

Sec. 3. That all former acts authorizing the currency of foreign gold or silver coins and declaring the same a legal tender in payment for debts, are hereby repealed. * * * *

1874. Revised Statutes, Sec. 3567, *repeats the first section of the act of 1857 preceding.*

Sec. 3584. No foreign gold or silver coins shall be a legal tender in payment of debts.

II.—NOTES.

CONSTITUTION. Art. 1, Sec. 8. The Congress shall have power * * * * to borrow money on the credit of the United States; to coin money, regulate the value thereof and of foreign coin.

Art. 1, Sec. 10. No State shall * * * coin money, emit bills of credit, make anything but gold and silver coin a tender in payment of debts; pass any * * * law impairing the obligation of contracts.

STATUTES: *United States Notes.*

1862. Act of February 25, Sec. 1. *Provides for the issue of $150,000,000 notes and* "such notes herein authorized shall be receivable in payment of all taxes, internal duties, excises, debts and demands of every kind due to the United States, except duties on imports, and of all claims and demands against the United States of every kind whatsoever, except for interest upon bonds and notes which shall be paid in coin and shall also be lawful money and a legal tender in payment of all debts public and private within the United States, except duties on imports and interest aforesaid."

1862. Act of March 17, Sec. 2. *Provides that demand notes issued under the act of July 17, 1861,* "shall be lawful money and a legal tender, in like manner and for the same purposes and to the same extent as the notes authorized" *by the preceding act.*

1862. Act of July 11, Sec. 1. Provides for a further issue of notes and repeats above provision.

1863. Joint Resolution of January 17. Same.

1863. Act of March 3. Same.

Interest-bearing notes.—

Prior to 1862 these notes when issued by the Treasury, were made receivable for public dues, but were never made legal tender.

1863. Act of March 3, Sec. 2. *Provides for interest-bearing Treasury notes which* "may be made a legal tender to the same extent as United States notes for their face value, excluding interest."

5% notes.

1864. Act of June 30, Sec. 2. *Provides for issue of 3-year notes and such of them as were payable, principal and interest at maturity,* "shall be legal tender to the same extent as United States notes for their face value, excluding interest," *except that they are not legal tender in redemption of any bank notes.*

Compound interest notes.

Treasury notes of 1890.—

1890. Act of July 14. *Provides for the issue of Treasury notes to be* "a legal tender in payment of all debts public and private, except where otherwise expressly stipulated in the contract."

Fractional paper currency.—

The act of July 17, 1862, authorized the issue of stamps for fractional parts of a dollar; that of August 21, 1862, authorized "postal currency," to be receivable for all public dues to the extent of five dollars; the act of March 3, 1863, made these notes, thenceforward called "fractional currency," receivable for all public dues except customs to the amount of three dollars.

LEGAL TENDER DECISIONS.

State Courts.—Such notes may constitutionally be made a legal tender in payment of all debts between individuals. *Metropolitan Bank* vs. *Van Dyck, 27 N. Y., 451.*

Congress has constitutional power to issue Treasury notes of the United States and make them lawful money and a legal tender for the payment of debts.

52 Penna. State, 9,100; 26 Ind., 116; 23 Ind., 141.

Ground-rents payable in *silver dollars* are redeemable in such notes, *52 Penna., 9.* And even when specific as dollars of 16 dwt. 6 gr. *52 Penna., 18, 45, 102.* So if payable in "lawful money," or a certificate of deposit of gold payable in like funds, *Ibid.; also 20 Wis., 494, 16 Iowa, 243; 18 Wis., 140.* So a note payable "*in specie*," *52 Penna., 28, 102.* So a note payable in "dollars in gold." *52 Penna., 30. 6 Allen (Miss.), 516.*

So "or if paid in paper the amount thereof necessary to purchase the gold at the place of payment." *26 Ind., 116.*

Contra.—Bond payable in *good coins of the United States of a particular fineness,* notwithstanding any law which may now, or hereafter shall make, anything else a legal tender, is payable in such coins only. *52 Penna., 109.*

Supreme Court.—The clause in the acts of 1862 and 1863 which makes United States notes a legal tender in payment of all debts, public and private, is, so far as it applies to debts contracted before the passage of those acts, unwaranted by the Constitution. *Hepburn* vs. *Griswold, 8 Wall. 603.* But in *Legal tender cases, 12 Wall. 529,* that Congress has the power to make notes legal tender both as to antecedent and subsequent debts. The issue of such notes and making them legal tender is a constitutional war power of Congress. (Reversing *Hepburn* vs. *Griswold.*)

In *Juillard vs. Greenman, 110 Wall. 404,* in which case the power of Congress to *reissue* notes under the act of May 31, 1878, when once the notes had been redeemed, the court upheld the act, declaring that in the exercise of sovereignty Congress might issue legal tender notes to be used as money, not only in time of war, but also in time of peace.

Table Illustrating the Present Monetary System of the United States.

	Gold Coin.	Gold Certificates.	Silver Dollars.	Silver Certificates.	United States Notes.	Treasury Notes of 1890.	National Bank Notes.	Subsidiary Silver Coin.	Minor Coin.
Weight	25.8 grains to the dollar	.....	412.5 grains.	.....	.....	.....	.....	385.8 gr. to the dollar.	5c piece. 77.16 grains.
Fineness	900–1000	.....	900–1000	.....	.....	.....	.....	900–1000	75% copper. 25% nickel.
Ratio to gold.	.....	.....	15.988 to 1.	.....	.....	.....	.....	14.953 to 1	1c piece. 48 grains. 95% copper. 5% tin and zinc.
Limit of issue	Unlimited; coinage free.	Issue suspended when free gold in Treasury is below $50,000,000	Coinage suspended.	Silver dollars in use.	$346,681,016	Issue ceased.	Volume of United States bonds and their cost.	Needs of the country.	Needs of the country.
Denominations	$20 10 5 2½	$10,000 5,000 1,000 500 100 50 20 10	$1	$1,000 500 100 50 20 10 5 2 1	$1,000 500 100 50 20 10 5 2 1	$1,000 100 50 20 10 5 2 1	$1,000 500 100 50 20 10 5	50 cents. 25 cents. 10 cents.	5 cents. 1 cent.
Legal tender	Unlimited.	Not a tender.	Unlimited unless otherwise contracted.	Not a tender.	Unlimited unless otherwise contracted.	Unlimited unless otherwise contracted.	Not a tender.	Not to exceed $10.	Not to exceed 25 cents.
Receivable	For all dues.	For all public dues.	For all dues.	For all public dues.	For all dues.*	For all dues	For all dues except duties on imports and interest on public debt.	To the amount of $10 for all dues.	To the amount of 25 cents for all dues.
Exchangeable.	For certificates under the limitation.	For gold coin at the Treasury, or any other moneys.	For silver certificates or smaller coin at the Treasury.	For dollars or smaller coin at the Treasury.	For all kinds of moneys except gold certificates.	For all kinds of moneys except gold certificates.	For silver and minor coin.	For minor coin.	....
Redeemable	.....	In gold coin at the Treasury.	May be deposited for silver certificates.	In silver dollars.	In coin at sub-treasury in New York and San Francisco in sums of $50 and over.	In coin at the Treasury and sub-treasuries.	In "lawful money" at the Treasury or bank of issue.	In "lawful money" at the Treasury in sums of $20 or any multiple.	In lawful money at the Treasury in sums of $20 or more.

*Duties on imports by regulation only.

OBSOLETE FORMS OF MONEY, UNITED STATES

FOREIGN COIN—OLD TREASURY NOTES AND CERTIFICATES—FRACTIONAL CURRENCY—TRADE DOLLARS—CURRENCY CERTIFICATES—COLONIAL PERIOD—CONTINENTAL CURRENCY.

Foreign Coin.

Before the mint established in 1792 was able to supply the demand for money, foreign coins continued to be accepted everywhere in the country at a fixed valuation, and Congress by act of February 9, 1793, made the gold coins of Great Britain, France, Spain and Portugal and the silver coins of France and Spain, a legal tender at their intrinsic value estimated upon the basis of the coinage law of 1792. Although the act limited the provision to three years, it was revived in 1798, again in 1806, 1819, 1821, 1823, 1834 and 1843. The act of February 21, 1857, finally repealed all laws making foreign coins a legal tender in the United States. For the purpose of estimating customs duties, the Director of the Mint values foreign coins quarter-yearly.

Old Treasury Notes and Certificates.

Treasury notes were issued during several extraordinary periods in the financial history of the country; but they were always interest-bearing and usually readily convertible and receivable for *all* public dues, although none were made legal tenders prior to 1862.

The first period was 1812-1815, during, and for the purpose of carrying on, the war of 1812. The general form adopted for this first issue of notes was continued in the later ones; they were usually in denominations of $100, payable to order, receivable for all payments to the government and payable to public creditors. The acts of June 30, 1812, February 25, 1813, March 4 and December 26, 1814, authorized the issue in the aggregate of $35,500,000 one-year notes, the issues of the later years providing for the redemption of those of the previous year. The actual issues amounted to $28,318,400, bearing interest at the rate of 5 2-5 per cent. (or 1½ cents per day on $100).

The act of February 24, 1815, provided for the issue of $25,000,000 of notes, redeemable within nine years, and convertible into bonds, a portion to be issued in small denominations; the latter were payable to bearer and bore no interest until converted into bonds. Authority was given to reissue notes received on

converted. The total issue amounted to $8,362,394, and the reissues to $7,182,740. These "war of 1812 notes" were very soon retired, either by redemption or conversion into bonds.

The second period, 1837-1843, followed the financial panic of 1837; the Treasury had up to 1836 accumulated a large surplus; the United States had no outstanding debt not provided for; and accordingly Congress by act of June 23, 1836, directed the distribution of the surplus to the states, according to population, in four installments; three of these installments were paid, the sum being somewhat in excess of $28,000,000. The fourth installment has never been paid. The disaster of 1837 left the Treasury almost without funds, and further issues of notes were resorted to.

The amounts authorized by the acts passed each year aggregated $31,000,000, payable in one or two years, with interest at not more than 6 per cent. nor less than 1 mill ($.001) per cent. Two millions were actually issued at this latter exceedingly low rate, probably because there was an active demand for stable paper money, which the banks could not supply. The authority to reissue notes received for public dues brought the entire issue to over $47,000,000; more than $46,000,000 were retired by 1845; but very few of these notes are now unredeemed.

The third period, 1846-1847, was during the Mexican war. The rates of interest were the same as during the preceding period; $33,000,000 were authorized, and only $809,900 of notes were reissued; all but $200,000 were retired prior to 1851.

The fourth period, 1857-1861, followed the panic of 1857. The authorizing acts were passed December 23, 1857, December 17, 1860, and March 2, 1861. Under these $88,154,250 in notes were issued (including reissues) at rates of interest from 3 to 12 per cent. Almost all these notes were redeemed or converted into bonds within two years from the date of issue.

The issue of interest-bearing notes during the period of the civil war amounted to nearly $1,450,000,000. First, under the act of July 17, 1861, three-year notes, bearing 7 3-10 per cent. (2 cents per day on $100) were issued to the amount of $140,094,750; following this, under the act of March 3, 1863, $44,520,000 one year, 5 per cent. notes, and $166,480,000 of two-year, 5 per cent. notes were issued in denominations of from $10 to $1,000: these notes were legal tender, the same as the United States notes still in circulation. Under an extension of the last-mentioned act by that of June 30, 1864, $266,675,440 of three-year notes, bearing 6 per cent. *compound* interest, also a legal tender, and in about the same denominations, were issued. The act of 1864, amended by that of March 3, 1865, gave authority for the issue of $829,992,500 of three-year notes, bearing 7 3-10 per cent. interest, but without the legal tender power. The act of March 3, 1865, permitted the conversion of these last-mentioned notes into bonds.

Of this vast issue of notes all but about $350,000 have been redeemed or converted.

During the civil war period, many forms of certificates were issued, not

to serve the purpose of circulation, but in some cases available for reserves of national banks, thus in a measure supplementing "lawful money" issues.

Temporary loan certificates were issued for thirty-day periods, on deposits of money or to public creditors, at 4, 5 and 6 per cent. The act of February 25, 1862, limited the amount to $25,000,000 (outstanding at any one time); that of March 17, 1862, increased it to $50,000,000, that of July 11, 1862, to $100,000,000, and finally that of June 30, 1864, to $150,000,000. Altogether the issues and reissues amounted to $716,099,247; all but about $2,850 have been retired.

The act of March 1, 1862, authorized the issue of 6 per cent. certificates of indebtedness, to run one year, to be paid to public creditors. The amount authorized was not fixed. The issue ceased in 1866, after $561,753,241 had been issued. Only $3,000 remains unpaid on this account.

Certificates of deposit bearing 3 per cent. were issued to redeem compound-interest notes, under the act of March 2, 1867, not to exceed $50,000,000; the act of July 25, 1868, authorized the issue of $25,000,000 additional. Including reissues, $88,155,000 were placed, of which $5,000 remain unredeemed. These were available for bank reserves.

Certificates amounting to $678,000, payable in five years, and bearing 4 per cent. interest, were issued under the act of July 8, 1870, to pay the State of Massachusetts for certain war expenditures in 1815. All have been retired.

Refunding certificates were issued under the act of February 26, 1879, in the denomination of $10 only, to aid in refunding the bonded debt, giving small investors an opportunity to obtain bonds; a form of "popular loan." They bear interest at the rate of 4 per cent., payable only on conversion into 4 per cent. bonds; they are convertible, *principal and interest,* into such bonds, in sums of $50 or any multiple; $40,012,750 was the limit of the issue; $26,280 remained unconverted July 1, 1907.

Fractional Currency.

The suspension of specie payments in 1861 caused not only gold, but silver as well, to be hoarded and exported; and soon thereafter the coin required for "small change" disappeared from circulation. Private institutions and firms began to provide small paper change of various forms, and postage stamps were also resorted to. Congress, by act of July 17, 1862, prohibited the further issue of such substitutes for currency by individuals, and provided for the issue of stamps; this was followed by an issue of "postal currency," on which the facsimiles of stamps appeared; it began August 21, 1862, and notes of the denomination of 5, 10, 25 and 50 cents were circulated, and made receivable for all public dues less than five dollars, and redeemable in notes in like sums.

The act of March 3, 1863, which first gave this currency the designation "fractional," also provided that it be received for all public dues as before, except duties on imports, and the act limited the issue to $50,000,000, made the notes redeemable in sums of three dollars, and permitted reissues to replace worn pieces. The act of June 30, 1864, extended the authority somewhat, and

under it notes of 3 cents (the then existing single letter postage rate) and of 15 cents, were issued.

The act of March 3, 1865, directed the issue of a 3-cent nickel coin, and the further issue of this denomination of notes ceased; under the act of May 16, 1866, a 5-cent nickel coin superseded the 5-cent note. In 1874 the Treasury discontinued the issue of the 15-cent notes. The act of January 14, 1875 (repeated in the act of April 17, 1876), provided for the coinage of subsidiary silver to replace all the fractional currency; and the issue ceased February 15, 1876.

But the fractional notes were popular, and the redemption was slow. Congress, therefore, by joint resolution of July 22, 1876, directed the issue of $10,000,000 of subsidiary coin in lieu of United States notes, which notes were to be held as a fund for the redemption of the fractional currency. This latter proviso was repealed by the act of June 21, 1879. On June 30 of that year the amount of fractional currency unredeemed was $15,842,610.11; on January 1, 1895, it was still over $15,250,000, of which amount it was estimated $8,375,934 had been destroyed, and would never be presented; the remainder is still carried as a liability of the Treasury. There is reason to believe that the amount destroyed is much larger than here given. Statistics relating to this currency are given below:

Fractional Currency Issued and Outstanding to June 30, 1905.

Denominations.	Amounts Issued.	Outstanding June 30, 1905.
3 cents	$ 601,923.90	$ 90,207.12*
5 cents	5,694,717.85	1,858,567.57
10 cents	82,198,456.80	5,057,210.67
15 cents	5,305,568.40	240,071.11
25 cents	139,031,482.00	4,270,868.64
50 cents	135,891,930.50	3,758,122.30
Total	$368,724,079.45	$15,275,047.41
Less destroyed at Chicago fire, denomination unknown	.....	32,000.00
Unredeemed June 30, 1905		$15,243,047.41

* The rule as to redemption of mutilated pieces for the fractional value applied to these notes also.

The amount carried in the debt statement as outstanding on June 30, 1907, was $6,863,994.28.

The several issues of fractional currency by series were as follows:

1st.	1862-1863	$20,215,635.00
2d.	1863-1867	23,164,483.65
3d.	1864-1869	86,115,028.80
4th.	1869-1875	176,567,032.00
5th.	1874-1876	62,661,900.00
	Total	$368,724,079.45

The number of *pieces* issued was 1,819,223,300.

Trade Dollars.

The act of February 12, 1873, provided for a trade dollar of 420 grains, 900-thousandths fine. Any owner of bullion might deposit the same and have it coined into these dollars, which were intended for trade with China and Japan, to compete with the Mexican silver dollar, which was a trifle less valuable.

The same act made all silver coins legal tender to the amount of $5, and this was construed to include the trade dollar, although it was never contemplated that this coin should circulate in the United States; accordingly by joint resolution of July 22, 1876, its legal-tender quality was abrogated, and the Secretary of the Treasury was authorized to limit the coinage to such an amount as he might deem necessary to meet the export demands. In October, 1877, the Secretary discontinued the receipts of bullion for this purpose, excepting in the Western mints; as it was found, however, that the trade dollars which were coined there, were put into circulation in the United States, the coinage was entirely discontinued February 22, 1878, except for "proof pieces."

The act of March 3, 1887, provided that for the period of six months thereafter trade dollars, not defaced, mutilated or stamped, be redeemed at their nominal value in standard silver dollars or subsidiary coin, and that the dollars so redeemed be recoined into standard dollars or subsidiary coin; the same act repealed all authority to coin trade dollars, and those not redeemed within the time specified have now only a bullion value.

The coinage of these pieces was as follows:

While they were a legal tender for $5	$15,631,450
From July 22, 1876, to February 22, 1878	20,327,910
Subsequently coined ("proof pieces" only)	6,564
Total coined	$35,965,924

The records of exports and imports show that from 1874 to 1887, $28,778,862 of these dollars were exported, and $1,706,020 imported; of the latter amount, $830,561 were imported subsequent to the redemption act of 1887; $919,459 were melted up at the mints prior to the redemption act, and $7,689,036 were redeemed; of the latter amount, $5,078,472 were recoined into standard dollars, and the remainder into subsidiary coin.

Currency Certificates.

Certificates of deposit for United States notes, payable to order, were issued to national banks by the Treasurer or any assistant-treasurer in denominations of $10,000 (at first also $5,000), under the act of June 8, 1872. These certificates bore no interest, and the notes were held on special deposit to redeem them at the place where issued. They were chiefly used in the settlement of clearing-house balances and in the reserves of the banks.

The banks were to a large extent relieved from the care of a redundant issue of small denominations of United States notes by these certificates.

The act of March 14, 1900, repealed the authority to issue these certificates and they disappeared from use by 1901. The total issues and reissues amounted to $1,473,625,000, of which $105,935,000 was in $5,000 pieces. The highest amount outstanding at the end of any year was $62,350,000 in 1897.

Colonial Period—Continental Currency.

Since the majority of the population of the colonies which developed into the United States came from Great Britain, it was natural to suppose that the British money system prevailed. This was true only in part; for although we find the chief money of account in common use the shilling, this was not, anywhere in the colonies in 1775, the British piece equal to about 25 cents. The Spanish system was prevalent and the unit was really the dollar. In some colonies 7½, in others 8, "shillings" were equal to a dollar; in others 5 and 6 were rated the equivalent. Thus the transition to the dollar system was easy; and during the Revolution the Continental Congress adopted it, making the paper currency issued then payable in dollars.

In 1786, after much discussion, a gold and silver coinage was determined upon, at the ratio of 15¼ to 1; the gold unit was to contain 24.627 grains of pure metal, and in silver 375.64 grains; the decimal system of division into dimes, cents and mills, was also decreed. There was no coinage of these pieces, and after the adoption of the Constitution (1789) the entire subject was reconsidered.

There was not much specie in the country prior to the opening of the nineteenth century; in several of the colonies the needs for money were provided by note-issues, most of which became worthless. Yet in the Revolutionary days the same means were resorted to. Not only did the Continental Congress issue "paper money," but all the states except Georgia also; in many cases with severe legal-tender laws to enforce its acceptance. At first the notes had some credit; but as the printing presses kept turning them out by millions, they depreciated very much. Thus by 1779 the currency was quoted at 4 cents to the dollar; in 1781 it fell to 1-5 ct. A worse money form could hardly be conceived, yet it was for a long time the sole medium. In all probability over $300,000,000 were issued; but there was also a large amount of counterfeit notes.

In 1790 Congress passed an act to redeem the currency at a rating of 1 ct. to the dollar, and the redemption period was extended to the end of 1797. There is no record of the amount redeemed. A considerable quantity is still in existence, chiefly in collections of curios.

FORMER BANK-NOTE SYSTEMS, UNITED STATES

THE UNITED STATES BANKS—STATE BANKS—THE SUFFOLK SYSTEM—FREE BANKING—DISCOUNTS ON NOTES.

From the beginning of the government under the Constitution until 1862-3 the paper money of the United States consisted exclusively of notes of banks; those organized under state charters, and (from 1791-1836) the two Banks of the United States. The first of these chartered banks was the Bank of North America of Philadelphia, still in existence as a national bank. Organized as a private institution on June 17, 1780, it received a perpetual charter from the Continental Congress on December 31, 1781, and opened business thereunder on January 7, 1782. On March 8, 1782, Massachusetts, and on April 1 following, Pennsylvania, also gave charters. The latter was temporarily withdrawn, but subsequently renewed and thereafter periodically extended until 1864. Its capital was $2,000,000.

The Massachusetts Bank was chartered in 1784, and the Bank of New York, organized in the same year, received a charter in 1791, the first bank chartered in New York state and the third in the Union, still operating under national organization.

In 1791 came also the first Bank of the United States, organized upon a plan recommended by Secretary Alexander Hamilton, adopted by act of Congress of February 25; its capital was $10,000,000, all paid up, either in coin (one-fourth) or United States bonds for the remainder; the government took one-fifth of the capital stock with money derived from bonds; there were twenty-five directors. The bank was prohibited from holding more real estate than was necessary for its business (except when taken for debts) and from dealing in stocks or bonds, or anything other than bills of exchange and bullion; unless with the consent of the United States it could not increase its liabilities beyond $10,000,000 in excess of its cash holdings, and directors were made personally liable for such excess. The interest rate on loans was not to exceed six per cent. (This was subsequently repealed.) There was no limit to the amount of its circulation other than the general one mentioned above, and its notes were receivable in all payments due the United States. The government had the privilege of using the bank as its receiving and disbursing agent, and guaranteed that no other banks would be chartered by Congress during its existence.

Only meager reports of the transactions of the bank are in existence. It had in January, 1809, a circulation of $4,500,000, and two years later over

$5,000,000; its specie was reported at $5,000,000. Its charter expired in 1811. The government's stock was sold by 1802 at premiums as high as 45 per cent., and including the dividends received, the United States made nearly 57 per cent. on this investment.

Application was, of course, made to Congress to renew the charter as early as 1808, but without success, due largely to the opposition of the state banks, which objected to the continuance of the monopoly. The government moneys were accordingly removed to these banks after 1811; the war of 1812 intervening, specie payments were suspended by all of them south of New England in 1814, at which time about one hundred of these banks held $9,000,000 of the Treasury's funds.

The state banks were at this period quite numerous, but except in New England, not under careful supervision; the suspension of specie payments removed the only apparent check upon note issues, and an expansion took place reported to have been from $28,000,000 in 1811 to $110,000,000 in 1815. Being the sole medium of exchange, issued in denominations as low as 6 cents and irredeemable, great distress resulted; the public debt increased rapidly, the bonds of the United States selling at a discount of 15 per cent., for currency depreciated 20 and 25 per cent.

Reports of banks are not available prior to 1834, excepting for Massachusetts, which began in 1803 to require them; but the meager history of certain state banks for the period shows that the system generally prevailing was exceedingly lax. Bank charters were frequently given as the spoils of party to favored individuals, and bribery was at times resorted to to obtain them. There was no guarantee that the capital stock was paid in; very frequently it was not. And yet, at this time, the banking interests were important, as the following table shows:

Bank Statistics. 1784-1816.

	No. of Banks.	Capital.	Circulation.	Specie.
1784	3	$2,100,000	$2,000,000	$10,000,000
1790	4	2,500,000	2,500,000	9,000,000
1792	16	17,100,000	11,500,000	18,000,000
1800	28	21,300,000	10,500,000	17,500,000
1804	59	39,500,000	14,000,000	17,500,000
1811	89	52,750,000	28,100,000	15,400,000
1813	..	65,000,000	66,000,000	28,000,000
1814	..	80,000,000	.....	.....
1815	208	88,000,000	104,500,000	16,500,000
1816	246	89,800,000	110,000,000	19,000,000

The note inflation led many members of Congress who had previously opposed it, to vote in favor of the creation of a second Bank of the United

States; the bill passed January 20, 1815, but was vetoed by President Madison. A second bill was approved by him April 10, 1816.

The Second Bank of the United States.

The charter was for twenty years—to March 3, 1836. The capital stock was $35,000,000, of which the government took $7,000,000, again issuing bonds to make the subscription; and five of the twenty-five directors were appointed by the President. The indebtedness of the bank exclusive of deposits was limited to the amount of its capital stock, and its notes were receivable in all payments to the United States. It took charge of the Treasury funds, transfers of stocks and negotiation of loans for the government, free of charge. The Secretary of the Treasury had the power, however, to direct the deposit of public moneys elsewhere than in the bank and its branches, subject to report to Congress.

In order to prevent concentration of control the voting powers of the shares was limited by an ingenious plan under which not more than thirty votes could be cast by any shareholder, and the small holders had a relatively greater power than those who held large amounts. The bank was prohibited from dealing in stocks and bonds and could not charge more than 6 per cent. for loans.

As to notes, none of denominations less than $5 were authorized, and all smaller than $100 were to be payable on demand; if payment in specie was suspended the bank became liable for interest on notes and deposits at 12% per annum. The directors were made personally liable for debts contracted in excess of the capital and deposits.

Managing officers for the branches, which might be established anywhere in the United States, were appointed by the directors of the bank.

Congress pledged itself to grant no other bank charter (except in the District of Columbia) during the existence of the bank.

On the 7th of January, 1817, in the midst of the depression which lasted from 1814 to 1820, the bank began business. It appears that prior to 1819, owing to the troublous times, the charter was violated four times, but Congress deemed it wise not to repeal it.

In 1819 the bank imported $7,000,000 in specie from Europe at an expense of $500,000, to aid in restoring stability. This expense, and other material losses, threatened the bank seriously; but from 1820 the country and the bank prospered, and all opposition to it appeared to have been dissipated. It enforced the maintenance of soundness of the notes of state banks, by requiring redemption in coin; but when the banks themselves kept their notes good it received them for government dues, paying its own notes to the Treasury as needed. This was obviously an enormous benefit to the country; but since it prevented excessive note-issues many of the local banks resented the policy.

As early as 1829, however, President Jackson raised a constitutional ob-

jection against renewing the charter; it became a political question almost at once. Congress did not agree with the President; but nevertheless his Secretary of the Treasury, Taney, gave notice that after October 1, 1833, the public deposits would be made in state banks, the amount in the bank to be gradually withdrawn by payments of government expenses. The state banks thus supplied with large amounts of cash began a system of expansion; attracted by this opportunity new banks were organized without adequate safeguards; the circulation increased from $94,000,000 in 1834 to $149,000,000 in 1837. The bank naturally defended itself and party feeling ran high, but its charter was not renewed. It was freely charged that the bank contributed largely to the suspension of specie payments in 1837 and to the panic which followed; but the condition of the state banks was such that the crisis could hardly have been averted.

After the expiration of its federal charter in 1836 the bank continued under a charter from Pennsylvania until 1841, when it succumbed. Its affairs were finally settled in 1856. Its notes and deposits were paid in full; but the private shareholders, representing $35,000,000, lost all of this;—the $7,000,000 stock held originally by the government was paid back long before,—the government having profited in all over $6,000,000 from the investment.

It is proper to state that even if the charges against the management of the bank near the close of its existence were well-founded, the fact remains that it was a great institution, serving the purpose for which it was created admirably during the greater portion of the twenty years. It held in check the tendency to wild-cat finance; compelled the state banks to meet their obligations, thus limiting the issues of notes where no legal restrictions existed; and exerted itself to equalize interest rates throughout the country. Had the government of the United States been in the hands of a man of broader intelligence than Jackson possessed, the bank would have been re-chartered with such limitations as would have eliminated those tendencies which were pernicious.

Thus the people of the United States would to this day have had an efficient institution of finance such as practically every civilized nation has; this would have been of incalculable service to the nation; there would have been less, if any, currency troubles, fewer financial crises, greater stability in all business affairs; and a saving of losses of hundreds of millions. In its day the Bank of the United States was nearly on a par with that of England and that of France; had it been continued it would still be the peer of of these great institutions.

There was in that day a lack of political intelligence sufficient to provide adequate regulation of the bank by law; hence it had to be killed; a wanton destruction of an admirable institution. The influence of the state banks which wanted no regulation, which wanted in fact a license to do as they pleased, was powerful in the contest; and the people were misled, by the phantom of the "money power" raised by Jackson, to declare against the bank.

As an illustration of what the United States Bank was, and also what it

might have been, had it been preserved, the following data are presented, in millions of dollars:

United States Bank, 1832. (16 years old.)				Bank of England, 1832. (138 years old.)			
Capital	35.0	Loans	66.3	Capital	70	Loans and Securities	119
Circulation	21.4	Specie	7.0	Circulation	89		
Deposits	22.8	Due from banks	6.2	Deposits	40	Specie	25
Other items	3.6	Other items	3.3	Other items	16	Gov't bonds	71
Total	82.8	Total	82.8	Total	215	Total	215

At the time (1832) the aggregate banking power of the United States was 300 millions; to-day it is placed at 17,800 millions; to-day the resources of the Bank of England amount to 630 millions, including the gross assets of the issue department; the total banking power of Great Britain is probably 4,500 millions. Unquestionably the growth, and hence the international power, of our central bank, had it been continued, would have been as great as that of the English one, and of that of the French institution which shows resources of 1,160 millions.

During its existence the Bank's annual returns average as follows:

Capital	35.0	Loans	39.1
Deposits	12.3	Securities	9.1
Circulation	10.7	Specie	6.5
Due to foreign banks	0.8	Notes of other banks	1.4
Due to home banks	0.7	Due from other banks	2.4
Other items	4.0	Due from foreign banks	0.9
		Other items	4.1
Total liabilities	63.5	Total assets	63.5

Further data appear upon another page in conjunction with state bank statistics.

Upon the authority of Gallatin, writing in 1831, and of the Congressional Committee of 1830, the Bank maintained the soundness of the entire currency of the country. In the last-named publication it is asserted that no other human agency could have restored the currency from the chaos of 1817 and maintained it uniform. The great service, not usually given weight, was that it used its efforts specially to furnish the southern and western sections with reasonable facilities, exactly where they were needed most; in 1832 fully 70% of its notes were issued in these sections. Never since that period have those sections received as equitable consideration in this respect. It is recorded that its notes were accepted in parts of Europe and even in India practically on a par with Bank of England notes.

It is but fair to record that the people in the national election of 1840 reversed the Jacksonian policy and chose Harrison and a Congress favorable to a Bank of the United States. But Harrison died after only a brief period in the presidency; and his successor, Tyler, recreant to the declaration of the

people that elevated him to the office, vetoed repeated measures passed by Congress to improve the monetary system by the creation of one central bank.

The State Banks

which received the public deposits after 1833 were in a large measure loosely organized and managed. As before stated, Massachusetts and the rest of New England had fairly solid institutions. This was largely due to the penalty imposed for failure to redeem notes, and to the "Suffolk Bank system," inaugurated by the New England Bank of Boston in 1813, continued by other banks and finally by the Suffolk Bank of Boston alone.

The practice arose when the banks of Boston compelled other New England banks to redeem their notes on presentation or incur the penalty. First the notes were presented for redemption directly at the bank of issue; but subsequently the notes were redeemed at the Boston agency of the issuing bank. This system operated to restrict the note issues within wholesome limits, and as a result no Massachusetts bank suspended payment in 1814. And this was done in the absence of a comprehensive banking law; for it was not until 1829 that such a law, limiting the powers of banks and fixing liabilities of directors, was enacted. It was not, however, sufficiently restrictive, and the panic of 1837 caused thirty-two of the banks to suspend. From 1784 to 1836 only ten had failed.

The Suffolk system was extended and showed its greatest efficiency between 1840 and 1860, with the result that New England's currency was sound because under rational business restrictions. It was a credit currency almost entirely, yet the losses to noteholders did not equal ⅛ of one per cent. of the issues.

For many years New York possessed a banking system under which charters were given to favored persons, largely as political party spoils; the troubles of 1814-1820 were felt there as well as elsewhere, though not in the same degree. In 1821 a constitutional restriction requiring a two-thirds vote of the Legislature to grant charters, was adopted, but it did not serve the purpose of eliminating the favoritism.

In 1829 the "safety fund system" was adopted, requiring the establishment of a fund for the security of noteholders (and at first depositors as well), by a tax of ½ of 1 per cent. annually upon the capital stock of the banks, until the fund amounted to 3 per cent. of the bank capital.

Other states pursued various courses in establishing banks. Ohio, Indiana, Illinois, Tennessee and Kentucky tried state banks (in which the state was more or less directly interested), as well as specially chartered institutions. Other states experimented with all of the various forms then in use; but very few of the banks organized between 1803 and 1837 lived through the period following the last mentioned year, unscathed.

The following incomplete tables exhibit the conditions of the state banks by geographic sections of the country at various dates, amounts being given in millions and tenths.

The first table is confined to a statement of the number of banks and their capital; other statistics being unavailable. It was not until 1832 that the federal government provided by law for the collection of statistics of the banking interests of the country. Prior to that date the Secretaries of the Treasury from time to time collected data, but these are very incomplete.

In the first table, the marked and steady growth of New England institutions is conclusive proof of the solidity of the system of banking prevailing there. Instead of a decrease between 1820 and 1830, these states show an increase of 60 banks, with $15,400,000 capital; the Middle States (including New York, New Jersey, Pennsylvania, Delaware, Maryland and the District of Columbia) showed a slight decrease; the Southern States (including all south of the Potomac and Ohio Rivers) suffered most severely during the period, while the states of the West (represented by Ohio, Indiana, Illinois, Michigan and Missouri) were almost equally unfortunate.

I.—Number and Capital of State Banks, 1801-1830.

	1801		1805		1811		1815		1816		1820		1830	
	No.	Capital	No.	Capital	No.	Capital	No.	Capital	No.	Capital	No.	Capital	No.	Capital
New England States.	18	7.6	47	13.3	47	12.2	63	19.0	76	20.8	92	19.9	172	35.3
Middle States.....	12	12.9	20	21.3	25	21.6	111	49.0	116	49.9	116	49.0	115	47.7
Southern States.....	*2	3.0	7	5.6	12	7.8	22	12.8	33	17.0	74	30.9	30	25.7
Western States.....	..	...	†1	0.2	4	0.9	12	1.4	21	2.1	25	2.4	12	1.5
Total.....	32	23.5	75	40.4	88	42.6	208	82.2	246	89.8	307	102.2	329	110.2

*South Carolina only. †Ohio only.

The second table gives a few additional data relating to all the banks in the country to 1830.

II.—Condition of State Banks, 1813-1830.

Year	Number	Capital	Loans	Deposits	Circulation	Specie
1813.....	...	65	117	...	66.	28.
1815.....	208	82	150	...	100.	17.
1819.....	274	125	157	...	49.	21.5
1820.....	307	102	...	31.2	40.6	16.7
1829.....	329	110	...	40.8	48.3	14.9
1830.....	330	110	160	39.5	48.4	13.5

The third table gives the condition of the Bank of the United States at corresponding dates from 1817 to 1830, and from 1834 to 1840 for comparison with the fourth table.

III.—Condition of the Bank of the United States at Dates Corresponding with the Statements Above and Below.

Date.	Capital.	Loans.	Deposits.	Circulation.	Specie.
1817	35.	3.5	11.2	1.9	1.7
1819	35.	35.8	5.8	6.6	2.7
1820	35.	31.4	6.6	3.6	3.4
1829	35.	39.2	17.1	11.9	6.1
1830	35.	40.7	16.0	12.9	7.6
1833	35.	61.7	20.3	17.5	8.9
1834	35.	54.9	10.8	19.2	10.0
1835	35.	51.8	11.7	17.3	15.7
1836	35.	59.2	5.1	23.1	8.4
1837	35.	57.4	2.3	11.4	2.6
1838	35.	45.2	2.6	6.8	3.8
1839	35.	41.6	6.8	6.0	4.2
1840	35.	36.8	3.3	6.7	1.5

The fourth table gives a comprehensive statement of the condition of the state banks, by sections, for 1819 and from 1834 (the first year in which approximately full statistics were published by the Treasury Department) to 1840; also a similar statement for all of the state banks, and finally for these and the Bank of the United States combined. The statements are by no means complete.

IV.—Aggregate State Banks, 1819 and 1834-1840.

Year.	New England States.						Middle States.					
	No.	Cap.	Loans	Dep.	Circ.	Specie	No.	Cap.	Loans	Dep	Circ.	Specie
1819	85	16.5	20.7	3.6	5.5	1.9	*116	35.9	21.9	4.7	17.8	3.5
1834	243	50.6	74.8	17.9	15.2	2.3	135	53.4	101.5	33.3	30.7	6.6
1835	*a*258	52.8	78.7	17.7	17.5	2.0	*b*156	50.9	93.5	30.2	24.5	11.1
1836	*d*248	52.0	83.3	13.1	20.3	2.5	*e*151	60.1	121.5	47.5	34.9	11.7
1837	321	66.1	99.4	20.3	20.6	3.3	204	78.3	151.3	52.1	45.0	11.7
1838	309	62.3	84.0	13.5	17.8	4.0	204	80.8	127.7	30.6	28.8	10.
1839	308	62.2	84.4	11.3	19.1	3.4	199	79.0	133.3	33.3	38.0	12.6
1840	301	61.1	81.5	11.6	16.6	4.5	198	77.1	108.7	29.0	25.1	10.6

Year.	Southern States.						Western States.					
	No.	Cap.	Loans	Dep.	Circ.	Specie	No.	Cap.	Loans	Dep.	Circ.	Specie
1819	50	17.6	27.1	4.5	10.8	3.6	23	2.3	3.7	1.6	1.7	0.8
1834	‡30	15.3	27.5	5.1	11.6	1.7	§	...	....	...	...	...
1835	*c*116	56.6	87.0	16.7	25.9	8.1	45	7.6	12.	3.6	6.5	3.0
1836	155	84.9	195.6	36.7	52.2	13.2	61	11.0	23.4	11.5	13.5	4.6
1837	174	100.8	186.0	40.7	56.9	15.0	64	14.2	28.8	15.8	13.2	5.7
1838	195	114.1	185.2	31.4	50.5	12.8	78	20.5	30.1	7.9	12.5	5.7
1839	*f*159	107.4	165.4	25.	43.	16.6	85	22.0	31.8	7.3	16.7	6.0
1840	*g*169	128.9	169.5	23.6	43.9	10.9	73	21.0	28.2	4.8	12.0	4.2

Year.	All State Banks.						All State Banks and Bank of United States					
	No.	Cap.	Loans	Dep.	Circ.	Specie	No.	Cap.	Loans	Dep.	Circ.	Specie
1819 *h*.....	274	72.3	73.6	14.6	35.8	9.8	275	107.3	109.4	20.4	42.4	12.5
1834 *h*.....	408	119.3	203.8	56.3	57.6	10.6	409	154.3	258.7	67.1	76.8	20.6
1835 *h*.....	575	167.9	271.3	68.2	74.3	24.1	576	202.9	323.1	79.9	91.6	39.8
1836 *h*.....	615	208.2	283.8	108.9	121.0	32.0	616	243.2	443.0	114.0	144.1	40.4
1837	763	259.5	465.5	128.9	135.7	35.8	764	294.5	522.9	131.2	147.1	38.4
1838	786	277.8	427.1	83.4	109.6	32.5	787	312.8	472.3	86.0	116.4	36.3
1839 *h*.....	751	270.7	414.9	76.9	116.8	38.5	752	305.7	456.6	83.7	122.8	42.7
1840 *h*.....	741	288.2	388.0	69.0	97.5	30.2	742	323.2	424.8	72.3	104.3	31.7

* New York incomplete. † Delaware and New Jersey missing. ‡ South Carolina, Florida, Louisiana, Georgia and Kentucky missing. § No reports. *a* Vermont missing. *b* Delaware missing. *c* North Carolina missing. *d* Rhode Island missing. *e* New Jersey missing. *f* Mississippi missing. *g* Alabama and Tennessee missing. *h* Incomplete reports.

Attention is again attracted to the more favorable status of the banks of the New England States; whilst the panic of 1837 necessitated a contraction of their business and indeed caused some failures, the results on the whole were not nearly so disastrous as in other sections of the country, where the expansion had been much greater.

Table V. is from the statements of the condition of the banks published in the reports of the Secretary of the Treasury. While it accounts for more banks than the preceding statements, and is on that account more complete as far as it goes, it is impossible to show more than the aggregates.

V.—A More Complete Statement of all State Banks.

Year	No.	Capital	Loans	Deposits	Circulation	Specie
1834	506	200.0	324.1	75.7	94.8	23.0
1835	704	231.2	365.2	83.1	103.6	43.9
1836	713	251.9	457.5	115.1	140.3	40.0
1837	788	290.8	525.1	127.4	149.2	37.9
1838	829	317.6	485.6	84.7	116.1	35.2
1839	840	327.1	492.3	90.2	135.2	45.1
1840	901	358.4	462.9	75.7	107.0	33.1

Sufficient is shown by these statements to indicate that the experiences during the period under consideration were very costly, especially those resulting from the panic of 1837, which wiped out of existence vast sums represented by the defaulted bank notes, not to speak of the deposits which were never accounted for. The losses of the period were estimated at $800,000,000, practically all due to the disgraceful banking and currency systems.

But in many sections of the country the people profited by the severe lessons, and we find that at this time legislators began to feel the importance of state supervision over banks. New York had provided for bank commissioners,

and New England followed; the example thus set was copied by a number of other states.

New York's "safety fund system" did not prove equal to the strain of the disturbing events. Eleven of the safety fund banks failed in 1841-42; their circulation amounting to $1,548,588 was secured by $86,274 in the fund; and beside this liability, over $1,000,000 of deposits were then also a charge upon the fund. It was many years before the creditors and noteholders received payment in full from accruing taxes on the capital of safety fund banks.

In 1838 New York made a radical change in her banking laws—a change which was followed by many of the other states. This was the adoption of the "free banking system." Under this any number of persons might form banking associations and issue notes, provided that stocks of the United States, or of any state, or approved real estate mortgages, were deposited with the state as security. Stocks of other states were subsequently excluded, owing to losses incurred by their forced sale to protect noteholders after certain failures. In 1840 a law was enacted requiring the banks to redeem their notes at an agency designated by each of them, in New York city, Albany or Troy, at a slight discount—at first ½ of 1 per cent., and then (1851) ¼ of 1 per cent. To a limited extent the Suffolk bank method of forcing redemptions was resorted to by a few New York city banks; and those institutions which failed to provide for prompt redemptions were forced to close.

An additional improvement was inaugurated in 1850 under the constitutional amendment of 1846, which made shareholders individually liable to the amount of their shares for all debts of the bank, and noteholders were given a preference over other creditors. The safety fund banks were not interfered with, however.

This law here outlined is in force in the state of New York to-day, but is in abeyance, as far as note issues are concerned, by reason of the 10 per cent. federal tax on circulation, which was imposed by an act of Congress in 1866 upon all notes issued by individuals or corporations other than national banks.

The similarity of this New York law and the national bank act of the United States, indicates very clearly the source from which the authors of the latter drew their inspiration.

Massachusetts passed a free banking law in 1851, but only a few banks were organized under it, the old charters proving preferable and entirely safe; but the transition to the national system was so easy that by 1865 only one bank out of 183 remained under a state charter.

Ohio, after trying the safety fund system in addition to others, also adopted the free banking law in 1851; Indiana in 1852, Illinois in 1851, Tennessee in 1852, Wisconsin in 1853, Vermont, Louisiana, Virginia and Connecticut later. Michigan had adopted a law similar in many respects as early as 1837.

It is manifest that the security of the noteholder was quite well taken care of by the "free banking system," provided the *kind* of security was carefully selected and fixed. In many of the states, however, this was not done, and

noteholders lost very large sums. But this system, in addition to tying up considerable banking capital, and thus limiting the capacity of the bank to serve the community, had contributed to a less careful regard for the other safeguards in banking; and so it came about that states operating under almost identical laws showed such different results in their banking institutions.

Among the many successful institutions in the Western States, the one which proved most satisfactory, not so much by reason of the excellence of the law regulating its operations, as the superiority of its management, was the State Bank of Indiana and its branches, organized under a special charter of 1834. It issued notes purely upon its own credit.

The state loaned its credit to the shareholders and thus enabled them to obtain specie with which the bank started in business. Ten branches were authorized at first, but the number was subsequently increased. While the branches were independent so far as organization and general control was concerned, and while the shareholders of the branches retained the profits of their institutions, each one was liable for the debts of the others, and the directors of the parent bank retained possession of the plates from which the notes of branches were printed, thus controlling the circulation, which was limited to twice the capital of each institution. Loaning on land, that cause of so many failures, was prohibited; directors were made personally liable for violations of law; a system of minority representation prevented the bank from being controlled by a few individulas; no money could be loaned by any of the institutions upon its own shares.

The state's investment of $1,000,000 in the bank netted a profit of about $3,500,000; for the bank, under excellent management, not only weathered the storm of 1837, but paid the government deposits in full, paid large dividends, and in 1854 when its charter expired returned to its shareholders nearly double the original investment. Practically the same institution was rechartered in 1855, with a capital of $6,000,000, and continued until merged into a national bank. It was one of the few Western banks that did not suspend specie payments in 1857, and when it was merged its affairs were in an admirable condition.

Iowa created an institution upon similar lines in 1857 with excellent results.

As an extreme example of the opposite of the Indiana bank may be cited the experiences of the Planters' Bank of Mississippi and the Union Bank of the same state. This state also loaned its credit by the issue of bonds. The former bank had a capital of $3,000,000, of which $2,000.000 came from the state. The bank prospered, and in 1838 the Union Bank was chartered with a capital of $15,000,000; $15,000,000 in bonds were to have been issued, but after the negotiation of $10,000,000, the state repudiated its agreement, apparently on some well-founded charges of mismanagement against the bank. Subsequently the bonds were repudiated entirely and the people refused to permit the payment of interest on those issued for the Planters' Bank.

Again contrasting the experience of another state: Louisiana, which had learned costly lessons, passed a law in 1842 which gave the banking system of that state a well-earned reputation throughout the Union. Banks were permitted to issue notes on their credit, but were required to maintain a reserve in specie of 33 1-3 per cent. of their liabilities, the remainder to be covered by short commercial paper—not exceeding ninety days; they were prohibited from paying out each others' notes; prompt redemptions were required; directors were made personally liable, and examinations under a board of state officers were made periodically. Added to these legal provisions was the determination of the most solid of the banks to enforce them; banks which were delinquent were either brought into line by their New Orleans connections or went out of business.

Unquestionably the commercial prominence of New Orleans during this period (1842-1860) could have been maintained only by such a wholesome banking law, supplemented by the active co-operation of those in the business of banking. Missouri, Virginia, Kentucky, Ohio, and North Carolina also had for part of the period excellent institutions.

It is manifest from the foregoing that the requisites for safe banking with note issues were: 1. A proper guarantee for the prompt redemption of notes under severe penalty. 2. Personal liability of directors. 3. Capital actually paid in and circulation limited in proportion to such capital. 4. Official supervision and examination.

Wherever all of these requisites were provided, banking was reasonably safe and profitable; wherever they were lacking disaster followed. Capital stock was frequently paid for altogether in personal notes of hand, which in many cases were not met at maturity; notes were issued by institutions without *bona fide* capital and apparently without limit excepting that arising from the awakened incredulity of the community; where bond security was provided, it often happened that when failures occurred and note-holders fell back upon the bonds, they were found to be largely reduced in value or even worthless.

In many of the states it was apparently not regarded wrong to issue bank-notes with no intention of redeeming them.

The countless millions lost to the people of the United States through their experiments in banking should, it seems, have been sufficient to teach them the absolute necessity to provide the safeguards requisite to secure to them adequately protected currency; a currency which shall be satisfactory to the citizen of Maine, even though issued by a bank in Texas, and to the citizen of Georgia, even though emanating from a banking association in Minnesota.

After the panic of 1857 President Buchanan roundly denounced the state banks, but was unable to see that to correct the evil, action by national authority was requisite. But that panic taught many of the states valuable lessons, and the banks were in the aggregate strongest just about the time when the national law was finally passed.

The experience of the government with the state banks in which the public

moneys were deposited was very unsatisfactory and eventually, after experimenting with a number of devices, Congress in 1846 established the Independent Treasury system, by means of which, through assistant treasurers and special depositaries, the revenues were received and disbursed; in 1863 national banks were, however, also employed, as before stated, upon deposits of bond-security, thus affording a partial relief to the mercantile community from the temporary withdrawal from trade channels of the vast sums which at times the government receives and holds.

A statement showing the condition of the banks at several periods between 1840 and 1863 is given on the following page by geographical sections of the country. In certain cases the statistics are necessarily incomplete; but sufficient is shown to indicate the salient points in the statements for the periods. Amounts are, as before, stated in millions of dollars.

Reference to the last-mentioned tables will show the effect of the free banking legislation of 1852 and thereabout; the number of banks and the banking capital increased rapidly, and their transactions, particularly the note issues, grew largely; on the other hand the specie holdings were not increased in any similar proportions.

The panic of 1857 served to check the growth of banks; the number in 1858 being only six greater than in the preceding year; their circulation was reduced nearly $60,000,000; the specie holdings of course increasing under the influence of the general suspension of coin payments.

To further illustrate the condition of the currency during the periods under consideration, the following quotations of bank-notes are reproduced:

During the suspension of specie payments from 1814 to 1817 the depreciation of paper reached as much as 15 per cent. in New York, 17 per cent. in Philadelphia, and 23 per cent. in Baltimore. At the beginning of 1815 the fluctuations were very severe; from 15 per cent. in January to 2 per cent. in February in New York, and from 20 per cent. to 5 per cent. during the same period in Baltimore.

New York quotations in January, 1838, show that the notes of banks as far away from the metropolis as Alabama, Mississippi and Florida suffered a discount of from 8 to 15 per cent., while at the same time Maryland notes were at 3 and 4 per cent., and New England from 2½ to 3 per cent.

This was immediately after suspension of specie payments. Ordinarily for the three preceding years, New England notes were ½ of one per cent. off; those of the Middle States ranged as low as 2 per cent. and Southern and Western notes were discounted as much as 6 per cent.

In Philadelphia, in 1838, Mississippi notes were as low as 35 per cent. discount; Tennessee notes reached 30 per cent.; Illinois, Ohio and Indiana notes fell to 7½ per cent., although frequently quoted at par in 1835.

The lowest actual quotation in the record referred to, which is very incomplete, is 75 per cent. discount for notes of Kentucky banks in 1822.

VI.—State Banks, 1843-1863.

Year	New England States						Middle States					
	No.	Cap.	Loans	Dep.	Circ.	Specie	No.	Cap.	Loans	Dep	Circ.	Specie
1843	276	57.6	74.0	13.2	16.3	8.5	*210	78.5	88.3	31.9	21.7	15.8
1848	280	58.4	92.7	13.2	26.3	4.2	‡264	72.2	131.2	53.2	43.5	14.3
1853	401	90.3	159.2	28.9	53.8	6.7	§283	71.7	159.5	79.0	35.2	13.2
1854	439	100.9	172.4	31.4	52.7	6.9	‡442	114.8	283.6	111.9	61.1	22.8
1857	504	117.8	180.0	28.6	43.1	6.5	‡470	140.3	300.0	139.9	62.7	23.4
1858	496	119.5	181.1	42.3	38.0	13.2	‡459	154.4	247.7	113.8	44.3	38.0
1860	506	125.3	204.6	43.9	47.5	9.1	‡485	159.1	289.6	145.8	53.1	33.2
1863	*f*284	55.4	81.6	21.1	30.9	2.8	491	155.3	266.8	267.7	82.4	51.3

Year	Southern States						Western States					
	No.	Cap.	Loans	Dep.	Circ.	Specie	No.	Cap.	Loans	Dep.	Circ.	Specie
1843	†142	77.2	76.6	13.5	17.0	12.4	55	16.2	14.9	2.1	6.4	2.9
1848	†144	62.7	88.4	20.6	35.6	19.5	*b*68	9.5	18.8	6.6	14.9	6.1
1853	*a*93	52.0	97.3	29.8	48.5	19.5	116	12.8	26.1	10.5	19.9	5.8
1854	*c*202	83.8	142.0	33.3	.6	23.5	164	19.0	32.3	13.8	23.5	6.2
1857	*c*227	64.0	161.1	40.5	73.8	21.6	212	22.0	35.7	15.4	24.9	6.1
1858	*d*200	90.0	116.9	29.5	43.	22.0	220	23.8	27.5	9.9	19.8	5.3
1860	*e*246	104.9	168.2	52.9	74.0	31.8	325	34.4	43.8	13.8	35.5	8.3
1863	*g*64	34.7	38.7	14.6	22.5	15.2	*h*184	23.8	32.6	21.3	22.1	10.8

Year	All Banks						Another Statement of All Banks					
	No.	Cap.	Loans	Dep.	Circ.	Specie	No.	Cap.	Loans	Dep.	Circ.	Specie
1843 *i*	683	229.6	253.7	60.6	61.4	39.6	691	228.9	254.5	56.2	58.6	33.5
1848 *i*	756	202.7	331.1	93.6	120.3	44.2	751	204.8	344.5	103.2	128.5	46.4
1853 *i*	893	226.8	442.1	148.2	157.4	45.2	750	207.9	408.9	145.6	146.1	47.1
1854 *i*	1247	318.5	630.3	190.4	209.0	59.4	1208	301.4	557.4	188.2	204.7	59.4
1857 *i*	1413	374.0	676.7	224.4	204.5	57.6	1416	370.8	684.5	230.3	214.8	58.3
1858 *i*	1375	387.8	573.3	195.5	145.7	78.5	1422	394.6	583.2	185.9	155.2	74.4
1860 *i*	1562	424 7	706.3	256 3	210.1	82.4	1562	421.9	691 9	253.8	207.1	83.6
1863 *i*	1023	269.2	419.7	324.8	157.8	80.1	1466	405.0	648.6	393.7	238.7	101.2

* Delaware incomplete. † South Carolina incomplete; Mississippi and Florida missing. ‡ District of Columbia missing. § New Jersey and Pennsylvania missing. *a* South Carolina incomplete; Florida missing. *b* Illinois missing. *c* Florida missing. *d* Florida and Tennessee missing. *e* Mississippi missing. *f* Massachusetts missing; all banks converted into Nationals. *g* Includes only Louisiana, Kentucky and Tennessee. *h* Wisconsin, Kansas, Nebraska missing. *i* Incomplete returns.

THE CHARTER OF THE SECOND BANK OF THE UNITED STATES

AN ACT TO INCORPORATE THE SUBSCRIBERS TO THE BANK OF THE UNITED STATES.

Be it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That a Bank of the United States of America shall be established, with a capital of thirty-five millions of dollars, divided into three hundred and fifty thousand shares, of one hundred dollars each share. Seventy thousand shares, amounting to the sum of seven millions of dollars, part of the capital of the said bank, shall be subscribed and paid for by the United States, in the manner hereinafter specified; and two hundred and eighty thousand shares, amounting to the sum of twenty-eight millions of dollars, shall be subscribed and paid for by individuals, companies, or corporations, in the manner hereinafter specified.

SEC. 2. That subscriptions for the sum of twenty-eight millions of dollars, towards constituting the capital of the said bank, shall be opened on the first Monday in July next, at the following places: that is to say, at Portland, in the district of Maine; at Portsmouth, in the State of New Hampshire; at Boston, in the State of Massachusetts; at Providence, in the State of Rhode Island; at Middletown, in the State of Connecticut; at Burlington, in the State of Vermont; at New York, in the State of New York; at New Brunswick, in the State of New Jersey; at Philadelphia, in the State of Pennsylvania; at Wilmington, in the State of Delaware; at Baltimore, in the State of Maryland; at Richmond, in the State of Virginia; at Lexington, in the State of Kentucky; at Cincinnati, in the State of Ohio; at Raleigh, in the State of North Carolina; at Nashville, in the State of Tennessee; at Charleston, in the State of South Carolina; at Augusta, in the State of Georgia; at New Orleans, in the State of Louisiana; and at Washington, in the District of Columbia. And the said subscriptions shall be opened under the superintendence of five commissioners at Philadelphia, and of three commissioners at each of the other places aforesaid, to be appointed by the President of the United States, who is hereby authorized to make such appointments, and shall continue open every day, from the time of opening the same, between the hours of ten o'clock in the forenoon and four o'clock in the afternoon, for the term of twenty days, exclusive of Sundays, when the same shall be closed, and immediately thereafter the commissioners, or any two of them, at the respective places aforesaid, shall cause two transcripts or copies of such subscriptions to be made, one of which they shall send to the Secretary of the Treasury, one they shall retain, and the original they shall transmit, within seven days from the closing of the subscriptions as aforesaid, to the commissioners at Philadelphia aforesaid. And on the receipt of the said original subscriptions, or of either of the said copies thereof, if the original be lost, mislaid, or detained, the commissioners at Philadelphia aforesaid, or a majority of them, shall immediately thereafter convene, and proceed to take an account of the said subscriptions. And if more than the amount of twenty-eight millions of dollars shall have been subscribed, then the said last-mentioned commissioners shall deduct the amount of such excess from the largest subscriptions, in such man-

ner as that no subscription shall be reduced in amount, while any one remains larger: *Provided,* That if the subscriptions taken at either of the places aforesaid, shall not exceed three thousand shares, there shall be no reduction of such subscriptions, nor shall, in any case, the subscriptions taken at either of the places aforesaid be reduced below that amount. And in case the aggregate amount of the said subscriptions shall exceed twenty-eight millions of dollars, the said last-mentioned commissioners, after having apportioned the same as aforesaid, shall cause lists of the said apportioned subscriptions, to be made out, including in each list the apportioned subscription for the place where the original subscription was made, one of which lists they shall transmit to the commissioners or one of them, under whose superintendence such subscriptions were originally made, that the subscribers may thereby ascertain the number of shares to them respectively apportioned as aforesaid. And in case the aggregate amount of the said subscriptions made during the period aforesaid, at all the places aforesaid, shall not amount to twenty-eight millions of dollars, the subscriptions to complete the said sum shall be and remain open at Philadelphia aforesaid, under the superintendence of the commissioners appointed for that place; and the subscriptions may be then made by any individual, company, or corporation, for any number of shares, not exceeding, in the whole, the amount required to complete the said sum of twenty-eight millions of dollars.

SEC. 3. That it shall be lawful for any individual, company, corporation, or State, when the subscriptions shall be opened as hereinbefore directed, to subscribe for any number of shares of the capital of the said bank, not exceeding three thousand shares, and the sums so subscribed shall be payable, and paid, in the manner following; that is to say, seven millions of dollars thereof in gold or silver coin of the United States, or in gold coin of Spain, or the dominions of Spain, at the rate of one hundred cents for every twenty-eight grains and sixty hundredths of a grain of the actual weight thereof, or in other foreign gold or silver coin at the several rates prescribed by the first section of an act regulating the currency of foreign coins in the United States, passed tenth day of April, one thousand eight hundred and six, and twenty-one millions of dollars thereof in like gold or silver coin, or in the funded debt of the United States contracted at the time of the subscriptions respectively. And the payments made in the funded debt of the United States, shall be paid and received at the following rates: that is to say, the funded debt bearing an interest of six per centum per annum, at the nominal or par value thereof; the funded debt bearing an interest of three per centum per annum, at the rate of sixty-five dollars for every sum of one hundred dollars of the nominal amount thereof; and the funded debt bearing an interest of seven per centum per annum, at the rate of one hundred and six dollars and fifty-one cents, for every sum of one hundred dollars of the nominal amount thereof; together with the amount of the interest accrued on the said several denominations of funded debt, to be computed and allowed to the time of subscribing the same to the capital of the said bank as aforesaid. And the payments of the said subscriptions shall be made and completed by the subscribers, respectively, at the times and in the manner following; that is to say, at the time of subscribing there shall be paid five dollars on each share, in gold or silver coin as aforesaid, and twenty-five dollars more in coin as aforesaid, or in funded debt as aforesaid; at the expiration of six calendar months after the time of subscribing, there shall be paid the further sum of ten dollars on each share, in gold or silver coin as aforesaid, and twenty-five dollars more in coin as aforesaid, or in funded debt as aforesaid; at the expiration of twelve calendar months from the time of subscribing, there shall be paid the further sum of ten dollars on each share, in gold or silver coin as aforesaid, and twenty-five dollars more, in coin as aforesaid, or in funded debt as aforesaid.

SEC. 4. That at the time of subscribing to the capital of the said bank as aforesaid, each and every subscriber shall deliver to the commissioners, at the place of subscribing, as well the amount of their subscriptions respectively in coin as aforesaid, as the certificates of funded debt, for the funded debt proportions of their respective subscriptions, together with a power of attorney, authorizing the said commissioners, or a majority of them, to transfer the said stock in due form of law to "The President, Directors, and Company, of the Bank of the United States," as soon as the said bank shall be organized. *Provided always,* That if, in consequence of the apportionment of the shares in the capital of the said bank among the subscribers, in the case, and in the manner, herein before provided, any subscriber shall have delivered to the commissioners, at the time of subscribing, a greater amount of gold or silver coin and funded debt than shall be necessary to complete the payments for the share or shares to such subscribers, apportioned as aforesaid, the commissioners shall only retain so much of the said gold or silver coin, and funded debt, as shall be necessary to complete such payments, and shall, forthwith, return the surplus thereof, on application for the same, to the subscribers lawfully entitled thereto. And the commissioners, respectively, shall deposit the gold and silver coin, and certificates of public debt by them respectively received as aforesaid from the subscribers to the capital of the said bank, in some place of secure and safe keeping, so that the same may and shall be specifically delivered and transferred, as the same were by them respectively received, to the President, Directors, and Company, of the Bank of the United States, or to their order, as soon as shall be required after the organization of the said bank. And the said commissioners appointed to superintend the subscriptions to the capital of the said bank as aforesaid, shall receive a reasonable compensation for their services respectively, and shall be allowed all reasonable charges and expenses incurred in the execution of their trust, to be paid by the president, directors, and company, of the bank, out of the funds thereof.

SEC. 5. That it shall be lawful for the United States to pay and redeem the funded debt subscribed to the capital of the said bank at the rates aforesaid, in such sums, and at such times, as shall be deemed expedient, any thing in any act or acts of Congress to the contrary thereof notwithstanding. And it shall also be lawful for the president, directors, and company, of the said bank, to sell and transfer for gold and silver coin, or bullion, the funded debt subscribed to the capital of the said bank as aforesaid: *Provided always,* That they shall not sell more thereof than the sum of two millions of dollars in any one year; nor sell any part thereof at any time within the United States, without previously giving notice of their intention to the Secretary of the Treasury, and offering the same to the United States for the period of fifteen days, at least, at the current price, not exceeding the rates aforesaid.

SEC. 6. That at the opening of subscription to the capital stock of the said bank, the Secretary of the Treasury shall subscribe, or cause to be subscribed, on behalf of the United States, the said number of seventy thousand shares, amounting to seven millions of dollars as aforesaid, to be paid in gold or silver coin, or in stock of the United States, bearing interest at the rate of five per centum per annum; and if payment thereof, or of any part thereof, be made in public stock, bearing interest as aforesaid, the said interest shall be payable quarterly, to commence from the time of making such payment on account of the said subscription, and the principal of the said stock shall be redeemable in any sums, and at any periods, which the Government shall deem fit. And the Secretary of the Treasury shall cause the certificates of such public stock to be prepared, and made in the usual form, and shall pay and deliver the same to the president, directors, and company, of the said bank on the first day of January, one thousand eight hundred and seventeen, which said stock it shall be lawful for the said president, directors, and company, to sell and transfer

for gold and silver coin or bullion at their discretion: *Provided,* They shall not sell more than two millions of dollars thereof in any one year.

SEC. 7. That the subscribers to the said Bank of the United States of America, their successors and assigns, shall be, and are hereby, created a corporation and body politic, by the name and style of "The President, Directors, and Company, of the Bank of the United States," and shall so continue until the third day of March, in the year one thousand eight hundred and thirty-six, and by that name shall be, and are hereby, made able and capable, in law, to have, purchase, receive, possess, enjoy, and retain, to them and their successors, lands, rents, tenements, hereditaments, goods, chattels and effects, of whatsoever kind, nature, and quality, to an amount not exceeding, in the whole, fifty-five millions of dollars, including the amount of the capital stock aforesaid; and the same to sell, grant, demise, alien or dispose of, to sue and be sued, plead and be impleaded, answer and be answered, defend, and be defended, in all State courts having competent jurisdiction, and in any circuit court of the United States; and also to make, have, and use, a common seal, and the same to break, alter, and renew, at their pleasure; and also to ordain, establish, and put in execution, such by-laws, and ordinances, and regulations, as they shall deem necessary and convenient for the government of the said corporation, not being contrary to the constitution thereof, or to the laws of the United States; and generally to do and execute all and singular the acts, matters, and things, which to them it shall or may appertain to do; subject, nevertheless, to the rules, regulations, restrictions, limitations, and provisions, hereinafter prescribed and declared.

SEC. 8. That for the management of the affairs of the said corporation, there shall be twenty-five directors, five of whom, being stockholders, shall be annually appointed by the President of the United States, by and with the advice and consent of the Senate, not more than three of whom shall be residents of any one State; and twenty of whom shall be annually elected at the banking house in the city of Philadelphia, on the first Monday of January, in each year, by the qualified stockholders of the capital of the said bank, other than the United States, and by a plurality of votes then and there actually given, acording to the scale of voting hereinafter prescribed: *Provided always,* That no person, being a director in the Bank of the United States, or any of its branches, shall be a director of any other bank; and should any such director act as a director in any other bank, it shall forthwith vacate his appointment in the direction of the Bank of the United States. And the directors, so duly appointed and elected, shall be capable of serving, by virtue of such appointment and choice, from the first Monday in the month of January of each year, until the end and expiration of the first Monday in the month of January of the year next ensuing the time of each annual election to be held by the stockholders as aforesaid. And the board of directors, annually, at the first meeting after their election in each and every year, shall proceed to elect one of the directors to be president of the corporation, who shall hold the said office during the same period for which the directors are appointed and elected as aforesaid: *Provided also,* That the first appointment and election of the directors and president of the said bank shall be at the time, and for the period hereinafter declared: *And provided also,* That in case it should at any time happen that an appointment or election of directors, or an election of the president of the said bank, should not be so made as to take effect on any day when, in pursuance of this act, they ought to take effect, the said corporation shall not, for that cause, be deemed to be dissolved; but it shall be lawful at any other time to make such appointments, and to hold such elections, (as the case may be), and the manner of holding the elections shall be regulated by the by-laws and ordinances of the said corporation: and until such appointments or elections be made, the directors and president of the said bank, for

the time being, shall continue in office: *And provided also,* That in case of the death, resignation, or removal of the president of the said corporation, the directors shall proceed to elect another president from the directors as aforesaid: and in case of the death, resignation, or absence, from the United States, or removal of a director from office, the vacancy shall be supplied by the President of the United States, or by the stockholders, as the case may be. But the President of the United States alone shall have power to remove any of the directors appointed by him as aforesaid.

SEC. 9. That as soon as the sum of eight millions four hundred thousand dollars in gold and silver coin, and in the public debt, shall have been actually received on account of the subscriptions to the capital of said bank (exclusively of the subscription aforesaid, on the part of the United States), notice thereof shall be given by the persons under whose superintendence the subscriptions shall have been made at the city of Philadelphia, in at least two newspapers printed in each of the places, (if so many be printed in such places respectively), where subscriptions shall have been made, and the said persons shall, at the same time, and in like manner, notify a time and place within the said city of Philadelphia, at the distance of at least thirty days from the time of such notification, for proceeding to the election of twenty directors as aforesaid, and it shall be lawful for such elections to be then and there made. And the President of the United States is hereby authorized, during the present session of Congress, to nominate, and, by and with the advice and consent of the Senate, to appoint, five directors of the said bank, though not stockholders, anything in the provisions of this act to the contrary notwithstanding; and the persons who shall be elected and appointed as aforesaid, shall be the first directors of the said bank, and shall proceed to elect one of the directors to be president of the said bank; and the directors and president of the said bank so appointed and elected as aforesaid, shall be capable of serving in their respective office, by virtue thereof, until the end and expiration of the first Monday of the month of January next ensuing the said appointments and elections; and they shall then and thenceforth commence, and continue the operations of the said bank, at the city of Philadelphia.

SEC. 10. That the directors, for the time being shall have power to appoint such officers, clerks, and servants, under them as shall be necessary for executing the business of the said corporation, and to allow them such compensation for their services, respectively, as shall be reasonable; and shall be capable of exercising such other powers and authorities for the well governing and ordering of the officers of the said corporation, as shall be prescribed, fixed, and determined, by the laws, regulations, and ordinances, of the same.

SEC. 11. That the following rules, restrictions, limitations, and provisions, shall form and be fundamental articles of the constitution of the said corporation, to wit:

First. The number of votes to which the stockholders shall be entitled, in voting for directors, shall be according to the number of shares, he, she, or they, respectively, shall hold, in the proportions following, that is to say; for one share and not more than two shares, one vote; for every two shares above two, and not exceeding ten, one vote; for every four shares above ten, and not exceeding thirty, one vote; for every six shares above thirty, and not exceeding sixty, one vote; for every eight shares above sixty, and not exceeding one hundred, one vote; for every ten shares above one hundred, one vote; but no person, co-partnership, or body politic, shall be entitled to a greater number than thirty votes; and after the first election, no share or shares shall confer a right of voting, which shall not have been holden three calendar months previous to the day of election. And stockholders actually resident within the United States, and none other, may vote in elections, by proxy.

Second. Not more than three-fourths of the directors elected by the stockholders, and not more than four-fifths of the directors appointed by the Presi-

dent of the United States, who shall be in office at the time of an annual election, shall be elected or appointed for the next succeeding year; and no director shall hold his office more than three years out of four in succession: but the director who shall be the president at the time of an election may always be re-appointed, or re-elected, as the case may be.

Third. None but a stockholder, resident citizen of the United States, shall be a director; nor shall a director be entitled to any emoluments; but the directors may make such compensation to the president for his extraordinary attendance at the bank, as shall appear to them reasonable.

Fourth. Not less than seven directors shall constitute a board for the transaction of business, of whom the president shall always be one, except in case of sickness or necessary absence: in which case his place may be supplied by any other director whom he, by writing, under his hand, shall depute for that purpose. And the director so deputed may do and transact all the necessary business, belonging to the office of the president of the said corporation, during the continuance of the sickness or necessary absence of the president.

Fifth. A number of stockholders, not less than sixty, who, together, shall be proprietors of one thousand shares or upwards, shall have power at any time to call a general meeting of the stockholders, for purposes relative to the institution, giving at least ten weeks' notice in two public newspapers of the place where the bank is seated, and specifying in such notice the object or objects of such meeting.

Sixth. Each cashier or treasurer, before he enters upon the duties of his office, shall be required to give bond, with two or more sureties, to the satisfaction of the directors, in a sum not less than fifty thousand dollars, with a condition for his good behaviour and the faithful performance of his duties to the corporation.

Seventh. The lands, tenements, and hereditaments, which it shall be lawful for the said corporation to hold, shall be only such as shall be requisite for its immediate accommodation in relation to the convenient transacting of its business, and such as shall have been *bona fide* mortgaged to it by way of security, or conveyed to it in satisfaction of debts previously contracted in the course of its dealings, or purchased at sales, upon judgments which shall have been obtained for such debts.

Eighth. The total amount of debts which the said corporation shall at any time owe, whether by bond, bill, note, or other contract, over and above the debt or debts due for money deposited in the bank, shall not exceed the sum of thirty-five millions of dollars, unless the contracting of any greater debt shall have been previously authorized by law of the United States. In case of excess, the directors under whose administration it shall happen, shall be liable for the same in their natural and private capacities: and an action of debt may in such case be brought against them, or any of them, their or any of their heirs, executors, or administrators, in any court of record in the United States, or either of them, by any creditor or creditors of the said corporation, and may be prosecuted to judgment and execution, any condition, covenant, or agreement to the contrary notwithstanding. But this provision shall not be construed to exempt the said corporation, or the lands, tenements, goods, or chattels of the same from being also liable for, and chargeable with, the said excess.

Such of the said directors, who may have been absent when the said excess was contracted or created, or who may have dissented from the resolution or act whereby the same was so contracted or created, may respectively exonerate themselves from being so liable, by forthwith giving notice of the fact, and of their absence or dissent, to the President of the United States, and to the stockholders, at a general meeting, which they shall have power to call for that purpose.

Ninth. The said corporation shall not, directly or indirectly, deal or trade in any thing except bills of exchange, gold or silver bullion, or in the sale of goods really and truly pledged for money lent and not redeemed in due time, or goods which shall be the proceeds of its lands. It shall not be at liberty to purchase any public debt whatsoever, nor shall it take more than at the rate of six per centum per annum for or upon its loans or discounts.

Tenth. No loan shall be made by the said corporation, for the use or on account of the Government of the United States, to an amount exceeding five hundred thousand dollars, or of any particular State, to an amount exceeding fifty thousand dollars, or of any foreign prince or state, unless previously authorized by law of the United States.

Eleventh. The stock of the said corporation shall be assignable and transferrable, according to such rules as shall be instituted in that behalf by the laws and ordinances of the same.

Twelfth. The bills, obligatory and of credit, under the seal of the said corporation, which shall be made to any person or persons, shall be assignable by endorsement thereupon, under the hand or hands of such person or persons, and his, her, or their executors or administrators, and his, her or their assignee or assignees, and so as absolutely to transfer and vest the property thereof in each and every assignee or assignees successively, and to enable such assignee or assignees, and his, her or their executors or administrators, to maintain an action thereupon in his, her, or their own name or names: *Provided,* That said corporation shall not make any bill obligatory, or of credit, or other obligation under its seal for the payment of a sum less than five thousand dollars. And the bills or notes which may be issued by order of the said corporation, signed by the president, and countersigned by the principal cashier or treasurer thereof, promising the payment of money to any person or persons, his, her or their order, or to bearer, although not under the seal of the said corporation, shall be binding and obligatory upon the same, in like manner, and with like force and effect, as upon any private person or persons, if issued by him, her or them, in his, her or their private or natural capacity or capacities, and shall be assignable and negotiable in like manner as if they were so issued by such private person or persons; that is to say, those which shall be payable to any person or persons, his, her or their order, shall be assignable by endorsement, in like manner, and with the like effect as foreign bills of exchange now are; and those which are payable to bearer shall be assignable and negotiable by delivery only: *Provided,* That all bills or notes, so to be issued by said corporation, shall be made payable on demand, other than bills or notes for the payment of a sum not less than one hundred dollars each, and payable to the order of some person or persons, which bills or notes it shall be lawful for said corporation to make payable at any time not exceeding sixty days from the date thereof.

Thirteenth. Half yearly dividends shall be made of so much of the profits of the bank as shall appear to the directors advisable; and once in every three years the directors shall lay before the stockholders, at a general meeting, for their information, an exact and particular statement of the debts which shall have remained unpaid after the expiration of the original credit, for a period of treble the term of that credit, and of the surplus of the profits, if any, after deducting losses and dividends. If there shall be a failure in the payment of any part of any sum subscribed to the capital of the said bank, by any person, copartnership or body politic, the party failing shall lose the benefit of any dividend which may have accrued prior to the time for making such payment, and during the delay of the same.

Fourteenth. The directors of the said corporation shall establish a competent office of discount and deposit in the District of Columbia, whenever any law of the United States shall require such an establishment; also one such

office of discount and deposit in any State in which two thousand shares shall have been subscribed or may be held, whenever, upon application of the legislature of such State, Congress may, by law, require the same: *Provided,* The directors aforesaid shall not be bound to establish such office before the whole of the capital of the bank shall have been paid up. And it shall be lawful for the directors of the said corporation to establish offices of discount and deposit, wheresoever they shall think fit, within the United States or the Territories thereof, and to commit the management of the said offices, and the business thereof, respectively to such persons, and under such regulations as they shall deem proper, not being contrary to law or the constitution of the bank. Or instead of establishing such offices, it shall be lawful for the directors of the said corporation, from time to time, to employ any other bank or banks, to be first approved by the Secretary of the Treasury, at any place or places that they may deem safe and proper, to manage and transact the business proposed as aforesaid, other than for the purposes of discount, to be managed and transacted by such offices, under such agreements, and subject to such regulations, as they shall deem just and proper. Not more than thirteen nor less than seven managers or directors, of every office established as aforesaid, shall be annually appointed by the directors of the bank, to serve one year; they shall choose a president from their own number; each of them shall be a citizen of the United States, and a resident of the State, Territory or District, wherein such office is established; and not more than three-fourths of the said managers or directors, in office at the time of an annual appointment, shall be re-appointed for the next succeeding year; and no director shall hold his office more than three years out of four, in succession; but the president may be always re-appointed.

Fifteenth. The officer at the head of the Treasury Department of the United States shall be furnished, from time to time, as often as he may require, not exceeding once a week, with statements of the amount of the capital stock of the said corporation and of the debts due to the same; of the moneys deposited therein; of the notes in circulation, and of the specie in hand; and shall have a right to inspect such general accounts in the books of the bank as shall relate to the said statement: *Provided,* That this shall not be construed to imply a right of inspecting the account of any private individual or individuals with the bank.

Sixteenth. No stockholder, unless he be a citizen of the United States, shall vote in the choice of directors.

Seventeenth. No note shall be issued of less amount than five dollars.

SEC. 12. That if the said corporation, or any person or persons, for or to the use of the same, shall deal or trade in buying or selling goods, wares, merchandise, or commodities whatsoever, contrary to the provision of this act, all and every person and persons by whom any order or direction for so dealing or trading shall have been given; and all and every person and persons who shall have been concerned as parties or agents therein, shall forfeit and lose treble the value of the goods, wares, merchandise and commodities in which such dealing and trade shall have been, one-half thereof to the use of the informer, and the other half thereof, to the use of the United States, to be recovered in any action of law with costs of suit.

SEC. 13. That if the said corporation shall advance or lend any sum of money for the use or on account of the Government of the United States, to an amount exceeding five hundred thousand dollars; or of any particular State, to an amount exceeding fifty thousand dollars; or of any foreign prince or state, (unless previously authorized thereto by a law of the United States), all and every person and persons, by and with whose order, agreement, consent, approbation and connivance, such unlawful advance or loan shall have been made, upon conviction thereof shall forfeit and pay, for every such offence,

treble the value or amount of the sum or sums which have been so unlawfully advanced or lent; one-fifth thereof to the use of the informer, and the residue thereof to the use of the United States.

SEC. 14. That the bills or notes of the said corporation originally made payable, or which shall have become payable on demand, shall be receivable in all payments to the United States, unless otherwise directed by act of Congress.

SEC. 15. That during the continuance of this act, and whenever required by the Secretary of the Treasury, the said corporation shall give the necessary facilities for transferring the public funds from place to place, within the United States, or the Territories thereof, and for distributing the same in payment of the public creditors, without charging commissions or claiming allowance on account of difference of exchange, and shall also do and perform the several and respective duties of the commissioners of loans for the several States, or of any one or more of them, whenever required by law.

SEC. 16. That the deposits of the money of the United States, in places in which the said bank and branches thereof may be established, shall be made in said bank or branches thereof, unless the Secretary of the Treasury shall at any time otherwise order and direct; in which case the Secretary of the Treasury shall immediately lay before Congress, if in session, and if not, immediately after the commencement of the next session, the reasons of such order or direction.

SEC. 17. That the said corporation shall not at any time suspend or refuse payment in gold and silver, of any of its notes, bills or obligations; nor of any moneys received upon deposit in said bank, or in any of its offices of discount and deposit. And if the said corporation shall at any time refuse or neglect to pay on demand any bill, note or obligation issued by the corporation, according to the contract, promise or undertaking therein expressed; or shall neglect or refuse to pay on demand any moneys received in said bank, or in any of its offices aforesaid, on deposit, to the person or persons entitled to receive the same, then, and in every such case, the holder of any such note, bill, or obligation, or the person or persons entitled to demand and receive such moneys as aforesaid, shall respectively be entitled to receive and recover interest on the said bills, notes, obligations or moneys, until the same shall be fully paid and satisfied, at the rate of twelve per centum per annum from the time of such demand as aforesaid; *Provided,* That Congress may at any time hereafter enact laws enforcing and regulating the recovery of the amount of the notes, bills, obligations or other debts, of which payment shall have been refused as aforesaid, with the rate of interest above mentioned, vesting jurisdiction for that purpose in any courts, either of law or equity, of the courts of the United States, or Territories thereof, or of the several States, as they may deem expedient.

SEC. 18. Provides for punishing counterfeiting notes, etc.

SEC. 19. Also relates to counterfeiting of notes, etc.

SEC. 20. *And be it further enacted,* That in consideration of the exclusive privileges and benefits conferred by this act, upon the said bank, the president, directors, and company thereof, shall pay to the United States, out of the corporate funds thereof, the sum of one million and five hundred thousand dollars, in three equal payments; that is to say: five hundred thousand dollars at the expiration of two years; five hundred thousand dollars at the expiration of three years; and five hundred thousand dollars at the expiration of four years after the said bank shall be organized, and commence its operations in the manner hereinbefore provided.

SEC. 21. *And be it further enacted,* That no other bank shall be established by any future law of the United States during the continuance of the corporation hereby created, for which the faith of the United States is hereby pledged. *Provided,* Congress may renew existing charters for banks in the District of

Columbia, not increasing the capital thereof, and may also establish any other bank or banks in said district, with capitals not exceeding, in the whole, six millions of dollars, if they shall deem it expedient. And notwithstanding the expiration of the term for which the said corporation is created, it shall be lawful to use the corporate name, style, and capacity, for the purpose of suits for the final settlement and liquidation of the affairs and accounts of the corporation, and for the sale and disposition of their estate, real, personal, and mixed: but not for any other purpose, or in any other manner whatsoever, nor for a period exceeding two years after the expiration of the said term of incorporation.

SEC. 22. *And be it further enacted,* That if the subscriptions and payments to said bank shall not be made and completed so as to enable the same to commence its operations, or if the said bank shall not commence its operations on or before the first Monday in April next, then, and, in that case, Congress may, at any time, within twelve months thereafter, declare, by law, this act null and void.

SEC. 23. *And be it further enacted,* That it shall, at all times, be lawful, for a committee of either house of Congress, appointed for that purpose, to inspect the books, and to examine into the proceedings of the corporation hereby created, and to report whether the provisions of this charter have been, by the same, violated or not; and whenever any committee, as aforesaid, shall find and report, or the President of the United States shall have reason to believe that the charter has been violated, it may be lawful for Congress to direct, or the President to order a scire facias to be sued out of the circuit court of the district of Pennsylvania, in the name of the United States, (which shall be executed upon the president of the corporation for the time being, at least fifteen days before the commencement of the term of said court), calling on the said corporation to show cause wherefore the charter hereby granted, shall not be declared forfeited; and it shall be lawful for the said court, upon the return of the said scire facias, to examine into the truth of the alleged violation, and if such violation be made appear, then to pronounce and adjudge that the said charter is forfeited and annulled. *Provided, however,* Every issue of fact which may be joined between the United States and the corporation aforesaid, shall be tried by a jury. And it shall be lawful for the court aforesaid to require the production of such of the books of the corporation as it may deem necessary for the ascertainment of the controverted facts: and the final judgment of the court aforesaid, shall be examinable in the Supreme Court of the United States, by writ of error, and may be there reversed or affirmed, according to the usages of law.

Approved, April 10, 1816.

OPINIONS ON THE UTILITY OF THE BANK.

Richard Rush, Secretary of the Treasury, annual report for 1828.

"Nor are these all the uses of this institution in which the government participates. It is the preservation of a good currency that can alone impart stability to prosperity, and prevent those fluctuations in its value, hurtful alike to individual and to national wealth. This advantage the bank has secured to the community by confining within prudent limits its issues of paper, whereby a restraint has been imposed upon excessive importations, which are thus kept more within the true wants and capacity of the country. Sometimes judiciously varying its course, it enlarges its issues, to relieve scarcity, as under the disastrous speculations of 1825. The State banks following, or controlled by its example, have shaped their policy towards the same salutary ends, adding fresh demonstrations to the truth that, under the mixed jurisdiction and powers of the state and national systems of government, a national bank is the instrument alone

by which Congress can effectively regulate the currency of the Nation. . . . In the financial operations of the Nation, as in the pecuniary transactions between man and man, confidence has succeeded to distrust, steadiness to fluctuation, and reasonable certainty to general confusion and risk."

Report of Senate Committee, 1829.

"This seems to present a state of currency approaching as near to perfection as could be desired; for here is a currency issued (through branches) at twenty-four different parts of the Union, obtainable by any citizen who has money or credit. When in his possession, it is equivalent to silver in all its dealings with the 9,000 agents of the Government throughout the Union. In all its dealings with the interior it is better than silver; in all its dealings with the commercial cities, equal to silver; and if, for any purpose, he desires the silver with which he bought it, it is at his disposal almost universally without any diminution, and never more than a diminution of one-quarter per cent. It is not easy to imagine, it is scarcely necessary to desire, any currency better than this."

Report of Committee of House of Representatives, 1830.

"But the salutary agency of the Bank of the United States, in furnishing a sound and uniform currency, is not confined to that portion of the currency which consists of its own bills. One of the most important purposes, which the bank was designed to accomplish, and which, it is confidently believed, no other human agency could have effected, under our federative system of government, was the enforcement of specie payments on the part of numerous local banks, deriving their charters from the several States, and whose paper, irredeemable in specie and illimitable in its quantity, constituted the almost entire currency of the country. Amidst a combination of the greatest difficulties, the bank has almost completely succeeded in the performance of this arduous, delicate and painful duty. With exceptions, too inconsiderable to merit notice, all the State Banks in the Union have resumed specie payment. Their bills, in the respective spheres of their circulation, are of equal value with gold and silver; while, for the operations of commerce beyond that sphere, the bills or the checks of the Bank of the United States are even more valuable than specie. And even in the very few instances in which the paper of State Banks is depreciated, those banks are winding up their concerns; and it may be safely said that no citizen of the Union is under the necessity of taking depreciated paper, because a sound currency cannot be obtained. . . .

"The banks were, directly and indirectly, the creditors of the whole community; and the resumption of specie payments necessarily involved a general curtailment of discounts and withdrawal of credit, which would produce a general and distressing pressure upon the higher class of debtors. These constituted the largest portion of the population of all the States where specie payments were suspended, and bank issues excessive. Those, therefore, who controlled public opinion in the States, where the depreciation of the local paper was greatest, were interested in the perpetuation of the evil. Deep and deleterious, therefore, as the disease evidently was, in many of the States, their legislatures could not have been expected to apply a remedy, so painful as the compulsion of specie payments would have been, without the aid of the Bank of the United States. And here it is worthy of special remark, that, while that bank has compelled the local banks to resume specie payments, it has most materially contributed, by its direct aid and liberal arrangements, to enable them to do so, and that with the least possible embarrassment to themselves and distress to the community. If the State legislatures had been ever so

anxious to compel the banks to resume specie payments, and the banks ever so willing to make the effort, the Committee are decidedly of the opinion that they could not have done it, unaided by the Bank of the United States, without producing a degree of distress incomparably greater than has been actually experienced."

Ex-Secretary Albert Gallatin (then president of a State Bank), 1830.

"Those statements also show that the Bank of the United States, wherever its operations have been extended, has effectually checked excessive issues on the part of the State banks, if not in every instance, certainly in the aggregate.

"We have indeed, a proof, not very acceptable perhaps to the bank, but conclusive of the fact, that it has performed the office required of it in that respect. The general complaints on the part of many of the State banks, that they are checked and controlled in their operations by the Bank of the United States, that, to use a common expression, it operates as a *screw,* is the best evidence that its general operation is such as had been intended. It was for that very purpose that the bank was established. We are not, however, aware that a single solvent bank has been injured by that of the United States, though many have undoubtedly been restrained in their operations much more than was desirable to them. This is certainly inconvenient to some of the banks, but in its general effect is a public benefit to the community.

"As respects the past, it is a matter of fact that specie payments were restored, and have been maintained, through the instrumentality of that institution. It gives a complete guarantee that under any circumstances its notes will preserve the same uniformity that they now possess. Placed under the control of the General Government, relying for its existence on the correctness, prudence and skill with which it shall be administered, perpetually watched and occasionally checked by both the Treasury Department and rival institutions, and without a monopoly, yet with a capital and resources adequate to the object for which it was established, the bank also affords the strongest security which can be given with respect to paper, not only for its ultimate solvency, but also for the uninterrupted solvency of its currency. The statements we have given of its progressive and present situation show how far those expectations have heretofore been realized."

Daniel Webster's views.

"The bank now, for many years, has accomplished every object intended by its establishment. It has reformed the currency, sustained it when reformed, and upheld a system of internal exchange, safe, cheap and of unprecedented and unparalleled facility. No country has seen the like; nor shall we see it soon again when the operations of the bank shall cease. The directors, of late years especially, have had a most difficult and undesirable duty to perform; but they have performed it, as I think, with entire uprightness and great ability. Every fair investigation has proved this, and the state of the bank itself, the best of all proofs, abundantly shows it. The time will come, I am sure, when justice will be done them, universally, as it is done them now by those who have sought for information, and have formed their judgments with candor and good sense."

"The manner in which the bank checks the issues of the State banks is equally simple and obvious. It consists of receiving the notes of all those which are solvent, and requiring payment from time to time, without suffering the balance due by any to become too large. We think that we may say that, on this operation, which required particular attention and vigilance, and must be carried on with great firmness and due forbearance, depends almost exclusively the stability of the currency of the country."

Louis McLane (Jackson's second Secretary of the Treasury), Annual Report, 1831.

"It must be admitted, however, that the good management of the present bank, the accommodation it has given to the government, and the practical benefits it has rendered the community, whether it may or may not have accomplished all that was expected from it, and the advantages of its present condition, are circumstances in its favor entitled to great weight, and give it strong claims upon the consideration of Congress in any future legislation on the subject."

Samuel D. Ingham (Jackson's first Secretary of the Treasury), writing in 1832.

"The bank has purified one of the worst currencies that ever infested any country or people. It consisted of mere paper, of no definite value, accompanied by worthless tickets issued from broken banks, petty incorporations and partnerships, in almost every village. Instead of this, the United States Bank has given us the best currency known among nations. It supplies a medium equal in value to gold and silver, in every part of the Union. It preserves with a steady and unerring power a uniform and equal value in the paper of the local banks; gives stability and certainty to the value of all property, and to the incalculable benefits of internal commerce; it maintains domestic exchanges, at a less premium than it would cost to transport specie; and enables the government to transmit its funds from one extremity of the Union to another, without cost, without risk, without pressure upon the section from which they are withdrawn, and with a despatch which is more like magic than reality."

BANKING UNDER STATE LAWS AFTER 1863

STATE BANKS—TRUST COMPANIES—SAVINGS BANKS—BANK POWER BY SECTIONS.

State banks continued without note-issues notwithstanding the introduction of the national system (1864), under varying regulations and rather lax reserve requirements. Reports are lacking prior to 1873, and are imperfect for more recent years, some states having had defective supervisory systems. The following comparison is from data collated by the Treasury:

State Bank Statistics.

(Amounts in millions)

Years	No. Banks	Capital	Surplus and Profits	Deposits	Due to Banks	Loans and Overdrafts	Bonds, etc.	Due from Banks	Cash and Cash Items	Total Assets
1874.....	?	59	15	138	14	155	18	19	38	237
1879.....	616	104	22	167	13	192	30	22	48	316
1884.....	817	110	44	325	27	332	34	49	82	521
1889.....	1671	167	65	507	43	508	38	80	133	796
1894	3586	244	102	658	54	666	84	120	145	1077
1899.....	4191	233	113	1164	108	917	172	255	217	1636
1904..... ...	6923	347	222	2073	163	1719	356	423	265	2864
1907.....	9967	472	281	3069	211	2532	489	548	351	4119

Maine, Vermont and Massachusetts are the only states which have no state banks as such.

It will be observed that the business of the state banks is quite important. In comparison with the national banks, it is to be said that the average capital of the institutions is smaller, thus enabling smaller communities to be served with banking facilities; the relative cash holdings are smaller, as state reserve laws are rather lax; the relative increase in business has been larger.

The following states and territories have no reserve laws: Alaska, Arizona, Arkansas, Delaware, Illinois, Maryland, Mississippi, Nevada, New Hampshire, New Mexico, Rhode Island, South Carolina, Tennessee, Vermont, Virginia.

None of the others has requirements equal to those of the national banking law,

Trust Companies.

In order to enable certain classes of financial operations to be undertaken, somewhat out of the line of those of banks in general, a number of states have authorized the organization of trust companies. Contrary to the original designs most of these companies also engage in business in competition with banks, and being under even less restraint than state banks respecting reserve requirements, they have grown marvelously in recent years, as the table below shows. Several of the states have recently provided for larger reserves.

Trust Companies' Statistics.

(Amounts in millions.)

Years	Number	Capital	Surplus	Deposits	Loans	Bonds, etc.	Cash, etc.	Total Assets
1874	35	22	7	85	66	39	9	123
1879	32	21	9	76	61	35	3	112
1884	35	24	20	189	158	51	5	240
1889	120	59	39	300	301	77	25	441
1894	224	97	75	471	374	142	34	705
1899	260	104	106	835	599	266	25	1071
1904	585	238	330	1600	1148	667	64	2380
1907	794	276	398	2062	1602	785	107	3071

In 1879 reports from one State missing.

Recently trust companies have been taking bank deposits also; in 1899 they had 3 millions due banks, in 1907 it was 168 millions.

In 1906 there were no trust companies reporting as such in New Hampshire and Vermont; none in the Southern States except Kentucky; and only in the following of the other states west of the Alleghanies: Indiana, Illinois. Missouri, Wisconsin, Minnesota, Kansas, California.

Private Banks

report in twenty-eight of the states; their importance is far less than formerly, yet they serve a distinct purpose in some sections. (The returns do not include the larger concerns in New York and elsewhere which make no reports.) Thirty years ago there were 3,400 with resources fully 500 millions; in 1907 the reports cover 1141 with 195 millions of resources.

Savings Banks.

The provision of institutions where small sums may be deposited, instead of being hoarded in stockings, etc., and kept out of circulation, has developed a very important banking element, although the growth has been almost sectional. There are two classes of savings banks: the one known as "mutuals" in which there are no stockholders and all net profits go to depositors, in a

sense philanthropic institutions; the other, "stock" banks, similar to the usual banking corporations. Some of the ordinary banks have also savings departments, a feature not regarded as commendable, since the two classes of business are essentially different.

Sixteen states have mutual savings banks; those of New England and the East as far south as Maryland; West Virginia, Ohio. Indiana, Wisconsin and Minnesota are the only other ones. North Carolina, South Carolina, Illinois, Michigan, Iowa and California have savings banks of the other class. The remaining states report none. The table following gives the aggregates, covering the period from 1820 (the first reports) to 1900 by decades. Inasmuch as the practice is to require notice on withdrawals of deposits (which are not subject to check), the cash holdings of these institutions are small; the aggregate is usually from 25 to 35 millions; or about 1% upon the deposits. The other assets are chiefly in the form of mortgages and bonds.

Savings Banks' Statistics.

Years	Number of Banks	Deposits millions	Depositors 0000	Average Deposits	Years	Number of Banks	Deposits millions	Depositors 0000	Average Deposits
1820	10	1	8.6	$131.86	1900	1002	2449	6107.0	$401.10
1830	36	7	38.0	183.09	1901	1007	2597	6358.7	408.30
1840	61	14	78.7	178.54	1902	1036	2750	6666.7	412.53
1850	108	43	251.4	172.78	1903	1078	2935	7035.2	417.21
1860	278	149	693.9	215.13	1904	1157	3060	7305.4	418.89
1870	517	550	1630.8	337.17	1905	1237	3261	7696.2	423.74
1880	629	819	2335.6	350.71	1906	1319	3482	8027.2	433.79
1890	921	1525	4258.9	358.03	1907	1415	3691	8588.8	429.64

The fact that savings banks are able to pay fixed interest leads many persons of considerable means to deposit them there; in some states therefore there is a legal limit to the amount which may be received ($3,000 approximately in many cases); the reason being that the institutions are designed for people of limited means. The limit is availed of in a good many instances, which renders the figures of average deposits in the table somewhat misleading, as an indicator of general thrift.

The remarkable relative growth in the decade 1880-1890, both in deposits and number of accounts, was accompanied by a much smaller increase in average deposits to each account. This indicates a great extension of facilities, as shown also by the increase in number of banks. The next decade shows a large increase in average deposits, but since 1901 the banks increased relatively more than the deposits.

Post-office savings banks are used in most civilized countries, under the direct supervision of the governments. Projects to establish similar institutions here have failed of adoption largely because the system would entail the maintenance of a public debt, in order to provide a form of security beyond question.

BANKING FACILITIES BY SECTIONS.

In the following table comparisons are presented of the provision of credit facilities by means of banks in the several sections of the country. The amounts given include the capital, surplus, profits, deposits and notes of *all* banks; the savings deposits in the states of the East naturally add to their preponderance over the less developed sections. The Pacific States also show large averages, due to California's wealth. For the earlier years the data are necessarily approximate; and even in later years, to 1900, the reports are incomplete.

Until 1898 Rhode Island had the maximum per capita of $353.45; in 1906 New York had the maximum of $639.80. Arkansas has had the lowest ratio; in 1906 $21.74.

Banking Facilities by Sections.

States* (Millions.)	1830	1840	1850	1860	1870	1880	1890	1900	1902	1905	1906	1906
New England.....	54	89	114	209	637	707	1229	1728	2052	2316	2392	13.2%
Eastern	107	131	185	371	1046	1335	2410	4281	6233	7938	8160	45.1
Southern	80	†196	140	223	147	158	387	552	844	1297	1502	8.3
Central	7	38	35	83	311	462	1055	1808	3071	3791	4170	23.0
Western	—	—	—	—	11	42	218	306	480	647	754	4.2
Pacific	—	—	—	—	50	98	315	467	640	885	1130	6.2
U. S.	248	454	474	886	2202	2802	5614	9142	13320	16874	18108	100.0
(Per Capita)												**Population**
New England	$28	$40	$42	$67	$183	$176	$262	$312	$355	$385	$393	7.2%
Eastern	26	26	28	44	108	114	171	251	351	424	428	22.7
Southern	16	†49	26	34	11	10	21	25	37	54	61	29.1
Central	4	11	6	9	28	27	55	75	129	152	164	30.1
Western	—	—	—	—	30	30	40	55	60	90	115	6.8
Pacific	—	—	—	—	62	100	139	147	198	255	320	4.1
U. S.	$19	$27	$20	$28	$57	$56‡	$90	$119‡	$169	$203	$215	100.0%

* New England: Me., N. H., Vt., Mass., R. I., Conn. Population 1906, 6.1 milns.
Eastern: N. Y., N. J., Pa., Del., Md., D. C. Population 1906, 19.1 milns.
Southern: Va., W. Va., N. C., S. C., Ga., Fla., Ala., Miss., La., Tex., Ark., Tenn., Ky. Population 1906, 24.5 milns.
Central: O., Ind., Ill., Mich., Wis., Minn., Iowa, Mo. Population 1906, 25.4 milns.
Western: N. D., S. D., Neb., Kas., Okla, Col., Wyo., Mon., N. Mex. Population 1906, 5.7 milns.
Pacific: Wash., Ore., Ida., Utah, Nev., Col., Ari., Alaska. Population 1906, 3 5 milns.
† Excessive expansion.
‡ Panic in preceding decades retarded growth.

The increase in the total in recent years has been satisfactory, but there is conclusive evidence of unequal distribution which still leaves the sections containing the largest part of the population at a disadvantage; in the past this condition has repeatedly caused demands for "more money" which developed into political questions and detrimental legislation; it is quite probable that the question will recur ere long. Improved banking methods would very largely remedy the evil.

The data relating to bank facilities by sections brought down to 1907, show an increase for the entire country of a little more than $13 per capita. New England states return over $15 increase, the Eastern states $10, Southern states $8, the Central section $9, the Western over $14 and the Pacific over $25.

The island possessions of the United States report nearly 42 millions of banking resources or about $4.56 per capita; of this sum Hawaii has nearly 10½ millions or $56.63 per capita; Porto Rico has 11 millions averaging $10.97 per head of population, and the Philippines with over 19 millions give $2.44 per capita.

It is natural that the distribution of money in banks by sections should be about in proportion with the resources of the institutions. This does not signify that the supply of general cash held by banks and people follows the same rule. In fact there is a notable exception in the case of New England, where the proportion of cash in banks (1907) is only 5.74%, whereas banking resources show more than double that ratio. The Eastern states held 47% or slightly more than their percentage of bank means; in the South the ratio is about 8% for both and the same may be said of the Western and Pacific states where the ratios are upward of 4% and of 6%, respectively. The Central states show nearly 28% cash against 23% of resources. Obviously the fact that the national "central reserve" banks are located in the Eastern and Central states (New York, Chicago and St. Louis), causes the preponderance there.

The aggregate cash holdings of all reporting banks for 1907 is given as 1113.7 millions, against 1016.4 millions for 1906. In the first named year banks in Eastern states held 519.2 millions of the total; those in the Southern states had only 87.2 millions. (The aggregate cash holdings of all banks, exclusive of insular institutions, is shown in a table on p. 106.)

The increase of the cash in all banks, in the past year (1906-7), is thus reported to have been 97.3 millions; the banks in the Eastern states acquired 57.2 millions, those in the Central states 25.3 millions; all the others only 14.8 millions; and of this sum 1.6 is assigned to the insular banks. The population of the two first-named groups of states is 45 millions, and that of the remaining ones (excluding islands), 41 millions.

In making comparisons of banking resources it is proper to recall that certain sections have no savings banks. Thus in New England the average per capita of savings bank resources is over $214; in the Eastern states nearly $96; in California about $190, which brings the Pacific states to $88, although no other state in that section has such banks. Western states show nothing, Southern States only 90 cents per capita and Central states only $10.06, Iowa with $71.68 per head bringing up the average.

Following is a recapitulation of the banking statistics of the United States in detail for 1907, the figures representing the condition about the middle of the year, in millions of dollars:

	6429 Nationals	9967 State	794 Trust Cos.	1415 Savings	1141 Private	19,746 All
Liabilities.						
Capital	884	472	276	34	25	1,691
Surplus and profits	720	281	398	235	11	1,645
Deposits	4323	3069	2062	3495	151	13,100
Due to banks	1685	211	168	8	3	2,075
Circulation	548	—	—	—	—	548
Other	317	86	167	11	5	586
Totals	8477	4119	3071	3783	195	19,645
Resources.						
Loans	4663	2532	1603	1833	133	10,764
Securities	1431	489	785	1646	10	4,361
Due from banks	1130	548	262	163	31	2,134
Cash	723	254	102	27	9	1,115
Checks, etc	306	97	5	3	1	412
Other	224	199	314	111	11	859
Totals	8477	4119	3071	3783	195	19,645

The banks in Hawaii, Porto Rico and the Philippines are included.

The cash includes national bank notes in each case.

It is noteworthy that national banks hold nearly 65% of the cash held by all, yet have only 33% of the deposits; excluding deposits of savings banks the national institutions have 45% of the remaining total. But the national banks carry fully 80% of the amount due to banks, including other banks' reserves; in other words state institutions of all kinds use the national ones as reserve depositaries. Since these bank deposits are also subject to the reserve requirements a comparison should be made including these items, but deducting from the resulting total the sums due *from* banks. Upon this basis the national banks hold about 50% of the *net* deposits (savings banks excluded), and, as above stated, 65% of the reserve cash.

The remaining institutions (state banks, trust companies and private banks), have thus a larger margin of loaning power than the national banks. It is expressed approximately by the ratios of 85% for the national banks and 92% for the others; the respective cash ratios being about 15% and 8%. Trust companies profit most largely by this difference, since they hold much smaller relative reserves.

Comparing the ratio of the total means applied to loans and securities, the national banks and the state banks show about 72% of the resources earning, whereas trust companies show over 77%. Savings banks, it will be observed, have over 92% of their means applied in the manner stated, which brings the ratio for all institutions to very nearly 80%.

Estimating the number of banks at 20,000 and the population at 86,000,000, we have one bank for about 4,300 population, a very fair result. While the average capital of national banks is above $120,000, that of the state banks is about $48,000. Very few of the state concerns and none of those under national charters have branches.

THE SUB-TREASURY SYSTEM

ITS ORGANIZATION—OPERATIONS—DISADVANTAGE OF THE SYSTEM.

Reference has already been made to the establishment, under an act of Congress of August 6, 1846, of the so-called Independent Treasury System. After the destruction of the Bank of the United States in 1833-1836, the government placed its revenues in the state banks and lost very largely by the change. The partisans of the Jacksonian policy were hence compelled to devise other means for the safekeeping of the money of the government; a plan was adopted in 1840, but repealed in 1841; five years later this law was passed, under which the Treasury, through officials appointed by the President, took charge of and disbursed the funds.

The law prohibited, under severe penalties, the deposit of revenues in banks, or their disposition otherwise than in payment of obligations of the government; all collectors of revenue were to deposit their receipts promptly with "Assistant Treasurers of the United States" (sub-treasurers), and all payments were to be made by drafts drawn upon the latter. The revenues were to be paid entirely in coin, or in such Treasury notes as were then receivable for public dues.

It followed that when the government receipts were measurably in excess of its payments, there was an accumulation of coin in the Treasury, thus depriving the people of its use, and the banks of reserve money. In the five years, 1853-1857, the average amount thus locked up and useless, was about $20,000,000, which was a very substantial part of the country's specie supply, and caused "tight money." The only means of getting it out was to pay off bonds of the government prior to maturity, at substantial premiums. The "money market" was hence subject to this imposition.

As has been stated, the sub-treasury act was modified in 1864, by providing that a part of the revenues might be held in national banks which furnished proper security for the repayment of the amounts; the revenue from customs (payable in coin) was not to be so deposited; and in practice it was held that no money once in the Treasury could be so disposed of, since the old law prohibited paying out money in the Treasury except upon warrant pursuant to an appropriation by Congress; following the constitutional provision. The rule was also adopted that security must be in the shape of government bonds. No interest has ever been exacted on these deposits, which are manifestly loans.

It is thus that the Secretary of the Treasury became empowered to use

the Treasury surplus, if any existed, to "assist the money market," practically by lending the banks the government money free of charge. The conditions created by the system demonstrate that it operates detrimentally. Upon the one hand, it is contended that the entire money supply should, as in other civilized countries, be available for business purposes, and not held idle, in part, in government vaults, subject to the power of one man. The action of the Secretary is almost always criticised, no matter how properly he may have exercised the power, and political rancor has been frequently engendered by the exercise.

Upon the other hand, it is urged that if the Treasury is permitted to hold a substantial sum of money, to be used with discretion in periods of stringency or increased demand, the element of elasticity of volume, so much needed, is, in a measure, provided for our monetary system; and thus the Treasury could regulate the currency and interest rates, somewhat after the manner which is in use by large central banks elsewhere. Prevailing opinion is, however, opposed to the grant of such power to one man or group of men in public office; it is conceivable that it may be misused or unwisely used; which would not happen in the case of regulation by a central bank properly constituted.

Moreover, the argument in favor of this sub-treasury plan admits at once the desirability of central bank regulation; and it is clearly shown by experience that the ability to serve the people by the make-shift system is limited; a surplus in the Treasury is a pre-requisite; and in order to be effective this surplus must be larger than the Treasury should ordinarily hold. Upon the other hand, until the system is changed it is plainly the duty of the Secretary of the Treasury to keep a substantial part of his balance available for deposit in banks, and to so deposit the same when occasion arises; and when the occasion has passed he should withdraw the deposits ratably.

The following brief account of the disposition of the balance in the Treasury since its establishment by fiscal year ends, is pertinent. From 1789 to 1836 it was always in banks: from 1791 to 1811 in the Bank of the United States, then for six years in state banks; again in the Bank of the United States from 1817 to 1833-4, when state banks were again employed. Until the great surplus of 1835, when the country had paid off all its debt, the balance had reached a maximum of $22,000,000 in 1816. In 1836 there was $46,000,000, and $28,000,000 was "deposited with the states"; it is still there; much of the rest was also lost in the crash of 1837, for early in that year there was less than $300,000 available, and the Treasury had to borrow money.

Small balances were held during the next ten years, partly in banks and partly by government officials; from 1846 to 1864 officials held all; a maximum of $22,000,000 was reached; the minimum appearing at $758,000 in 1848. From 1865 to 1884 the maximum ordinary balance was $182,678,000 in 1881; only $8,704,000 in banks; an extraordinary sum due to refunding of bonds appears in 1879 when it reached $367,000,000, of which the banks held $208,000,000. Bond operations also caused the large balance of $36,073,000 in banks in 1865, when the Treasury itself held only $5,300,000.

The entire balance between 1885 and 1904 was highest at $388,686,000, in 1903, the banks holding $140,459,000 thereof,—also the highest during the period. Low mark for the banks was $9,962,000 in 1893, and for the entire balance $118,885,000 in 1894. Some modifications in practice had been adopted in the later years; the provision of the bank depositary law, permitting the funds to be secured by government bonds *or otherwise,* was construed to allow the acceptance of state, municipal and railway bonds, which greatly facilitated the deposits; moreover, by keeping the revenues from sources other than customs separate, the other obstacle, of depositing money once in the Treasury, was set aside. Congress tacitly approved these changes, by taking no action, and in March, 1907, amended the law so as to permit customs revenues to be so deposited. As shown elsewhere the deposits in banks were increased late in 1907 to $264,000,000 out of a total balance of $420,000,000. (Since 1879 the balances include the gold reserve.)

It will be seen that among the reform plans there are several which propose that the current revenues be regularly deposited in national banks, without security, but subject to interest payment; and that the Treasury draw upon the banks to pay the expenses of the government. This would doubtless be an improvement.

That a central bank system, organized upon lines adapting to our use the best of the world's experience, would serve the purpose vastly better, appears now to be admitted by all who have given the subject serious and unprejudiced consideration. It would not only prove a direct benefit, but would be indirectly of advantage by removing the question of the disposition of the public money from the arena of politics, and relieve the head of the Treasury of an onerous burden and frequent criticism. It is contended, however, that the prejudice aroused by President Jackson, over seventy years ago, is still sufficiently strong to render the acceptance of such a plan by the people impossible. The subject is discussed further in the chapter upon the proposed plans for the reformation of our currency system.

THE VOLUME OF MONEY IN THE UNITED STATES, 1784-1907

THE OVER-ESTIMATE OF GOLD—DENOMINATIONS OF PAPER MONEY—LOCATION OF THE STOCK—SUPPLY AND DEMAND—EXPANSION IN PANIC PERIODS.

The following tables relative to the supply of money are given by certain periods in our monetary history which are indicated. The data are necessarily less accurate for the years prior to 1873, when more complete statistics became available. Even for the years subsequent to 1873 the estimates of the gold supply are subject to revision, as is set forth in future pages.

The first period is that from 1784 to 1820, including the operations of the first Bank of the United States, and showing the inflation following its abrogation and the contraction effected by the second Bank after its efficiency became felt in the currency system. Amounts and population are given in millions, per capita in dollars and cents. Specie includes sums held by banks. For the omitted years no data are available.

I.—MONETARY STOCK, 1784 TO 1820.

(Millions.)

Year	Specie	Bank Notes	Total	Population	Per Capita	Year	Specie	Bank Notes	Total	Population	Per Capita
1784	10.0	2.0	12.0	3.0	$4.00	1814	28.0	70.0	98.0	8.2	$11.95
1790	9.0	2.5	11.5	3.8	3.03	1815	25.0	75.0	100.0	8.5	11.76
1795	19.0	16.0	35.0	4.5	7.77	1816	23.0	68.0	91.0	8.7	10.46
1800	17.5	15.5	33.0	5.3	6.22	1817	22.0	76.9	98.9	8.9	11.11
1805	17.5	26.0	43.5	6.2	7.01	1818	20.0	68.3	88.3	9.1	9.70
1810	30.0	28.0	58.0	7.2	7.59	1819	20.0	51.6	71.6	9.3	7.70
1811	30.0	28.1	58.1	7.3	7.96	1820	24.3	44.6	68.9	9.6	7.18
1813	30.0	62.0	92.0	7.9	11.64						

Government Treasury notes issued during the period are not included, as they did not circulate extensively.

The inflation which caused the troubles is clearly shown in the last column.

The next table carries us through the period of the great activity of the second Bank of the United States, and the inflation following its destruction, which caused the panic of 1837. The marked increase in the volume of specie was due to the growth of commerce; but it was largely in silver until the change in the valuation of gold, 1834, already referred to in a previous chapter.

2.—MONETARY STOCK, 1821 TO 1840.

(Millions.)

Year	Specie	Bank Notes	Total	Population	Per Capita	Year	Specie	Bank Notes	Total	Population	Per Capita
1821	23.0	44.6	67.6	9.9	$6.83	1831	32.1	77.3	109.4	13.2	$8.29
1822	18.0	45.6	63.6	10.2	6.40	1832	30.4	91.3	121.7	13.6	8.95
1823	17.0	45.4	62.4	10.5	5.94	1833	30.7	90.5	121.2	14.0	8.66
1824	19.0	46.6	65.6	10.9	6.02	1834	41.0	114.2	155.2	14.4	11.87
1825	18.0	49.1	67.1	11.2	5.99	1835	51.0	121.3	172.3	14.8	11.64
1826	20.0	53.5	73.5	11.5	6.39	1836	65.0	163.7	228.7	15.2	15.04
1827	21.0	54.5	75.5	11.8	6.40	1837	73.0	149.2	222.2	15.7	14.15
1828	23.0	56.9	79.9	12.2	6.55	1838	87.5	116.1	203.6	16.1	12.64
1829	26.0	59.0	85.9	12.5	6.87	1839	87.0	135.2	222.2	16.6	13.38
1830	33.1	60.9	94.0	12.8	7.34	1840	83.0	107.0	190.0	17.1	11.11

The comparatively steady per capita sum is to be noted; then the startling increase which doubled the amount as soon as the restraint upon the banks was removed. Government Treasury notes, issued after 1836, are again excluded.

In the next table (3) the effect of the contraction movement is shown; the amount of money held in the Treasury under the sub-treasury law is also included. This table carries us through the expansion which was in part due to the gold production after 1849, and in part to bank-note inflation; this culminated in the troubles of 1857. The period properly closes with 1861, after which date the exigency of war induced the federal government to take control of the paper currency issues and a new era was inaugurated.

3.—MONETARY STOCK, 1841 TO 1861.

(Millions.)

Year	Specie	Bank Notes	Total	Specie in Treasury	In Circulation	Population	Per Capita
1841	80	107	187	1	186	17.6	$10.59
1842	80	84	164	..	164	18.1	9.02
1843	90	59	149	1	148	18.7	7.87
1844	100	75	175	8	168	19.3	8.68
1845	96	90	186	8	178	19.9	8.95
1846	97	106	203	9	194	20.5	9.43
1847	120	105	225	2	223	21.1	10.59
1848	112	128	240	8	232	21.8	10.66
1849	120	115	235	2	233	22.5	10.34
1850	154	131	285	7	278	23.2	12.02
1851	186	155	341	11	330	24	13.76
1852	204	172	376	15	361	24.8	14.63
1853	236	188	424	22	402	25.6	15.80
1854	241	205	446	20	426	26.4	16.10
1855	250	187	437	19	418	27.3	15.34
1856	250	196	446	20	426	28.1	15.16
1857	260	215	475	18	457	28.9	15.81
1858	260	155	415	6	409	29.7	13.78
1859	250	193	443	4	439	30.6	14.35
1860	235	207	442	7	435	31.4	13.85
1861	250	202	452	4	448	32.1	13.98

In this and the remaining tables the amounts are given in the nearest million (thus $5,789,000 is stated as 6); slight inaccuracies in making up aggregates will therefore necessarily appear here and there; but as they are never in excess of one million dollars, these inaccuracies do not in any material sense affect the value of the comparative tables; and the method employed is by far the most practicable.

Whenever amounts or figures are given otherwise than in millions (or decimals thereof) the specific designation is stated.

Treasury notes are again excluded. The indications are that the normal need of the country for money was, owing to the opening up of new areas, considerably larger than during previous periods; it was probably as high as $12 per capita. The effect of the sub-treasury operations is shown by the lock-up of considerable specie in a number of years; the specie stock became nearly stationary after 1855 despite large production, the exports having been in excess of imports.

Our next table (4) carries us through the inflation of the Civil War period and the era of the depreciated greenbacks. The great loss of specie helped to sustain the inflation; manifestly much of the existing stock of coin was hoarded during this period. State bank notes practically disappear under the influence of the 10% tax, which finally nationalized all the currency. The figures are now given for fiscal years ending June 30. After 1875 the fractional paper currency was gradually replaced by subsidiary silver. All the data are from Treasury reports.

4.—MONETARY STOCK, 1862 TO 1878.

(In millions of dollars.)

(Specie payments suspended December, 1861, resumed January, 1879.)

End of Fiscal Year	Specie	State Bank Notes	United States Notes*	National Bank Notes	Fractional Currency	Total	In the Treasury			In Circulation	Population	Per Capita in Circulation
							Specie	Paper	Total			
1862	35	184	150	..	..	369	† 10	24	34	335	32.7	$10.23
1863	45	239	391	..	20	695	† 20	79	99	596	33.4	17.84
1864	44	179	447	31	23	724	19	36	55	669	34	19.67
1865	66	143	431	146	25	810	41	55	96	714	34.7	20.57
1866	83	20	401	281	27	812	58	81	139	673	35.5	18.99
1867	139	4	372	299	28	842	114	66	180	662	36.2	18.28
1868	123	3	356	300	33	815	98	36	134	681	37	18.39
1869	137	3	356	300	32	828	112	51	163	665	37.8	17.60
1870	134	2	356	300	40	832	109	48	157	675	38.6	17.50
1871	117	2	356	318	41	834	92	26	118	716	39.6	18.10
1872	98	2	356	338	41	835	73	24	97	738	40.6	18.19
1873	101	1	356	347	45	850	76	22	98	752	41.7	18.04
1874	97	1	382	352	46	878	72	30	102	776	42.8	18.13
1875	88	1	376	354	42	861	63	44	107	754	44	17.16
1876	108	1	370	333	34	846	61	57	118	728	45.1	16.12
1877	155	..	360	317	20	852	92	38	130	722	46.4	15.58
1878	227	..	347	325	17	916	148	39	187	729	47.6	15.32

*Includes "Old Demand Notes." † Estimated.

The estimated stock of gold in the country from 1873 to 1878, and the correction of that estimate by me as explained hereafter, are as follows, in millions:

	Estimate	Revised		Estimate	Revised
1873	135	106	1876	130	100
1874	147	117	1877	168	137
1875	121	91	1878	213	181

It is reiterated that the money "in circulation" includes the sums held by banks.

During the Civil War (1861-1865) and subsequently, large amounts of notes and certificates were issued by the government which have been described in a previous chapter. Some of these issues performed for a time the functions of circulating media, and should be considered in connection with the above table. Thus the one and two-year notes and the compound-interest notes were full legal tender for their face value, and were consequently available for bank reserves; the 7.30 notes were *not* legal tender, and could not properly be classified as money, only an inconsiderable amount having actually circulated; but the 3 per cent. certificates of 1867 were by law made available for bank reserves and thus performed money functions; since they obviated the necessity of holding actual coin or notes to the extent in which so held.

In the reports of national banks it appears that an amount of 3% certificates of over 59 millions was held in October, 1868, and considerable amounts before and after that date. It is quite probable that the amount of money per capita was hence fully two dollars more than reported, in some of the years.

A table of the amounts of these forms of paper outstanding at the close of each of the years follows, in millions:

End of Fiscal Year	1-Year Notes	2-Year Notes	Compound Int. Notes	3 Per cent. Certificates	Total	7.30 Notes
1864	44	128	6	..	178	139
1865	8	42	192	..	242	672
1866	2	6	172	..	180	830
1867	..	..	135	..	135	813
1868	..	..	55	50	105	488
1869	..	..	3	52	55	37
1870	..	..	2	46	48	..
1871	..	..	..	32	32	..
1872	..	..	..	12	12	..

Gold certificates were used from 1865 to 1878, when the issue was suspended; but the amounts in use were not very large, since their use was confined to the payment of duties upon imports and interest on the public debt, during the suspension of specie payments. The largest amount in circulation was 34 millions in 1873; this sum was of course represented by gold in the Treasury, hence did not increase the money supply.

The indications are that normal demand for money rose to $15 per capita in the period.

Gold having again come into use after resumption of specie payments (1879), and silver coinage having been largely increased by the law of 1878, a more detailed statement of the money supply is furnished for the next period, which is carried down to 1890, when the silver legislation was radically altered. The amount of United States notes was unchanged, in accordance with the law of May, 1878.

The statistics are presented in three sections, the gross supply, that outside the Treasury and that in the Treasury, being separately given. The Treasury estimates are used without revising the gold stock; my own estimates are, however, appended to sections *a.* and *b.* of the table.

The actual increase in the gold supply is noteworthy, having been nearly 200%, bringing the ratio of gold to the total money stock above 40%.

Respecting section *a.* it is to be stated that the three issues of certificates classed under "Paper" are manifestly duplications of coin or notes, as indicated; hence they are deducted in the last column in order to show the effective stock, which represents the total of the aggregate "in circulation" and the net owned by the Treasury. The silver acquisition is the most prominent feature; the diminution of bank notes is also marked.

5.—Monetary Stock, 1879 to 1890.

(In millions of dollars.)

a.—The Total Supply, in Circulation and in the Treasury.

End of Fiscal Year	Specie				Paper						Aggregate	Deduct Certificates	Effective Supply	Per cent. Gold to Supply
	Gold Coin and Bullion	Silver Dollars and Bullion	Subsidiary Silver	Total	Gold Certificates	Silver Certificates	Currency Certificates	United States Notes	National Bank Notes	Total				
1879	246	41	70	357	15	3	29	347	330	724	1081	47	1034	23.8
1880	352	70	72	494	8	13	14	347	344	726	1220	35	1185	21.3
1881	478	95	74	647	6	51	12	347	355	771	1418	69	1349	35.4
1882	507	123	74	704	5	67	13	347	358	790	1494	85	1409	36.2
1883	543	152	74	769	82	89	13	347	356	887	1656	184	1472	36.9
1884	546	180	75	801	98	121	12	347	339	917	1718	231	1487	36.7
1885	589	209	75	873	140	140	30	347	318	975	1848	310	1538	38.3
1886	591	237	75	903	131	116	18	347	312	924	1827	265	1562	37.9
1887	655	277	76	1008	121	146	9	347	279	902	1910	276	1634	40.1
1888	706	310	76	1092	142	229	15	347	252	985	2077	386	1691	41.7
1889	680	344	76	1100	154	263	17	347	211	992	2092	434	1658	41.0
1890	696	380	77	1153	158	301	12	347	186	1004	2158	472	1685	41.3

The revised estimate of the gold stock is as follows, in millions of dollars:

1879	212	1882	467	1885	535	1888	637
1880	318	1883	495	1886	534	1889	606
1881	443	1884	494	1887	591	1890	620

In section *b.* the money in the hands of the people and in banks is presented. Here we have evidence that the large silver dollar issues could not have been floated without the aid of the certificates; and that in fact there would have been a smaller volume of both in use but for the device of issuing the certificates in small denominations. Not until this became effective was the Treasury relieved of the burden of carrying silver at the expense of its gold fund, as shown in the next section. The silver was purchased in the markets with gold, and could not be paid out as rapidly as acquired. The issue of dollars also caused a return of subsidiary coins to the Treasury and the notable decrease in bank notes.

b.—The Amounts in Circulation (Outside the Treasury).

End of Fiscal Year	Specie				Paper						Aggregate	Population	Per Capita
					Certificates								
	Gold Coin	Silver Dollars	Subsidiary	Total	Gold	Silver	Currency	U.S. Notes	National Bank Notes	Total			
1879	111	8	61	180	15	..	29	272	322	638	818	48.9	$16.75
1880	226	20	48	294	8	6	14	314	337	679	973	50.2	19.41
1881	315	29	47	391	6	39	12	316	350	723	1114	51.3	21.71
1882	358	32	46	436	5	55	13	312	353	738	1174	52.5	22.37
1883	345	36	46	427	60	73	13	310	348	804	1231	53.7	22.91
1884	341	41	46	428	71	96	12	306	331	816	1244	54.9	22.65
1885	342	38	44	424	127	101	30	302	309	869	1293	56.1	23.02
1886	358	53	46	457	76	88	18	306	308	796	1253	57.4	21.82
1887	377	56	49	482	91	142	9	317	277	836	1318	58.7	22.45
1888	391	56	50	497	121	201	15	293	245	875	1372	60	22.88
1889	376	55	51	482	117	257	17	300	207	898	1380	61.3	22.52
1890	374	56	54	484	131	298	12	323	181	945	1429	62.6	22.82

The revised estimate of gold supply gives the amounts in circulation as follows:

1879..	77	1881..	280	1883..	297	1885..	288	1887..	313	1889..	302
1880..	192	1882..	318	1884..	289	1886..	301	1888..	322	1890..	299

The further development of the country raised the normal per capita need for money to above $20 early in the period.

In section *c.* the amount of all kinds of money in the Treasury is stated; the sums held for certificates is then deducted, leaving the amount actually owned by the government, which includes the gold reserve, tacitly held to have been 100 millions, after the law of 1882.

The Treasury balance showed a material growth, but the silver acquisitions converted a large part into silver money, which was not available for use generally. It thus occurred that by 1885 the gold balance fell low,—to the figure reported in 1879,—and the ratio of free gold to the notes actually in circulation declined; measured against all paper in circulation (except gold certificates), the decline was even greater. This latter comparison is pertinent,

since the national bank notes are actually redeemable by the Treasury and the silver certificates are partly credit notes.

c.—The Amounts in the Treasury.

End of Fiscal Year	Total	Held for Certificates	Net Owned	Gold ‡	Silver ‡	Subsidiary	Certificates		U.S. Notes	National Bank Notes	Free Gold *	Per Cent. of Free Gold to	
							Gold	Silver				U. S. Notes	All Paper†
1879	263	47	216	120	30	9	..	3	46	8	120	39.0%	19.4%
1880	247	35	212	118	37	24	..	7	19	7	118	36.0	17.6
1881	304	69	235	157	15	27	..	12	19	5	157	47.9	21.9
1882	320	84	236	144	24	28	..	12	22	6	144	44.3	19.6
1883	425	184	241	116	27	28	22	16	24	8	138	42.5	18.5
1884	473	230	243	107	19	29	27	24	28	9	134	42.1	18.0
1885	555	310	245	107	30	31	13	39	15	10	120	36.1	16.1
1886	574	265	309	102	68	29	55	28	23	4	157	48.1	21.8
1887	592	276	316	157	76	27	30	4	20	2	187	57.3	25.1
1888	705	386	319	173	25	26	21	29	38	7	194	62.9	25.7
1889	712	434	278	150	26	25	37	6	30	4	187	59.1	23.9
1890	728	472	256	164	22	23	27	4	12	4	191	57.0	23.4

* Gold and gold certificates.
† U. S. Notes, bank-notes and silver certificates in circulation, but *not* gold certificates.
‡ Includes bullion in the Treasury in process of coinage, etc.

The large increase in the Treasury balance in 1886 marks also the sharp decline in the per capita of money in circulation; an effect of the sub-treasury law. The Treasury to protect itself from going upon a silver basis, adopted the policy of accumulating funds, instead of purchasing bonds with the surplus revenues, as had been the practice for twenty years. Thus it restored its gold balance, which, by 1888, reached the highest *relative* point in the record, with respect to the support of all credit paper.

The final period into which the study of the money volume is divided covers the years from 1891 to 1907. The legislation of June 14, 1890, became effective in the following fiscal year. The increased silver acquisition contributed largely to the financial crisis of 1893; and in the years following, the silver question was finally "fought to a finish" so far as further purchases of the white metal went. When purchases were suspended by the act of November, 1893, there was a large amount of uncoined bullion on hand, which was finally converted into dollars and subsidiary coin by 1905.

The statistics are again presented in sections.

The table showing the total supply includes certificates representing specie and notes, and the Treasury notes of 1890, which had silver bullion and dollars behind them; this is a duplication, and the amount of these four items is to be deducted from the aggregate to give the effective supply as shown in the last column.

Special features are, the decrease of gold pending the silver controversy and the recovery after the determination of the political issues of 1896, but more particularly after the enactment of the gold standard law of 1900. These incidents occurred just as the world's gold production showed such a great in-

crease. This country obtained its fair share of the increment. The silver dollar supply increased, after the suspension of purchases, only by the amount of the profit on coinage; the decrease in later years was due to the use of some of the stock for subsidiary coin, and the export of dollars to our insular possessions.

6.—MONETARY STOCK, 1891 TO 1907 (in millions of dollars).

A. *The Total Supply, in circulation and in the Treasury.*

End of Fiscal Year	Specie				Paper							Aggregate	Effective Supply	Per Cent. Gold to Supply
	Gold Coin and Bullion	Silver Dollars and Bullion	Subsidiary Silver	Total	Gold Certificates	Silver Certificates	Treasury Notes	Currency Certificates	U. S. Notes	National Bank Notes	Total			
1891...	647	439	78	1164	152	315	50	22	347	168	1054	2218	1678	38.5
1892...	664	491	77	1232	157	332	102	30	347	172	1140	2372	1752	37.9
1893...	598	538	77	1213	94	332	147	12	347	179	1111	2324	1739	34.4
1894...	627	548	76	1261	66	337	153	59	347	207	1169	2420	1805	34.7
1895...	636	548	77	1261	48	329	146	55	347	212	1137	2398	1819	35.0
1896...	600	552	76	1228	43	343	130	32	347	226	1121	2349	1800	33.3
1897...	696	557	76	1329	39	375	115	61	347	231	1168	2497	1906	36.5
1898...	862	561	76	1499	38	399	101	26	347	228	1139	2638	2074	41.5
1899...	963	564	75	1602	34	406	94	21	347	241	1143	2745	2190	44.0
1900...	1034	567	83	1684	228	416	76	4	347	310	1380	3064	2340	44.2
1901...	1125	570	90	1785	289	435	48	..	347	354	1473	3258	2485	45.3
1902...	1192	574	97	1863	346	454	30	..	347	356	1533	3396	2565	46.5
1903...	1249	576	102	1927	409	465	19	..	347	414	1654	3581	2688	46.5
1904...	1328	575	107	2010	495	470	13	..	347	449	1774	3784	2806	47.3
1905...	1358	572	115	2045	518	465	9	..	347	496	1835	3880	2886	47.1
1906...	1476	570	118	2164	560	477	7	..	347	561	1952	4116	3070	48.1
1907...	1602	566	130	2298	678	476	6	..	347	604	2111	4409	3255	47.1

Note—Some of the Treasury tables do not include the silver bullion in the Treasury; others, and this one, do.

The revised estimate of the gold stock is as follows:

1891.....570	1896.....496	1901..... 977	1906.....1312
1892.....586	1897.....584	1902.....1040	1907.....1437
1893.....518	1898.....739	1903.....1095	
1894.....539	1899.....837	1904.....1170	
1895.....539	1900.....894	1905.....1194	

The officially accepted corrections reduce the estimate by 135 millions, which gives for 1907 a total of 1467 millions; an amount of about 30 millions remains as a difference for further consideration.

The gain in gold from 1896 to 1907 was nearly 140%. The ratio of gold to the total effective supply fell to 33 1-3% by 1896, but, recovering, reached a maximum of 48.1% in 1906.

THE REVISION OF THE ESTIMATE OF GOLD.

The writer became convinced over twenty years ago that the estimate of the stock of gold in the United States was excessive; a careful examination of the statistics from time to time, and discussions with the Treasury officials, ensued.

The reasons for this view are elaborately stated in several papers written during the period,* and are given briefly below.

The estimates in question are prepared in the Mint Bureau of the Treasury Department, the accepted basis being an estimate for 1873 which gave the total stock as $135,000,000. (Mint Report 1900, p. 40; 1905, p. 37.) The writer has pointed out repeatedly that this estimate was erroneous, it having been assumed at that time that the Treasury and the national banks held $105,000,000, whereas the sum so held was actually only $75,700,000; involving an overestimate of $29,300,000. (Finance Reports, 1873, p. 472; 1874, p. 191; 1887, p. XC.). Other errors, affecting later estimates, previously discovered by the writer, amounting to $50,000,000, were corrected in 1886 (Finance Reports, 1885, p. 180; 1886, p. 199; 1887, p. 144; see also Report on Production of Gold and Silver, 1885, p. 74.)

Originally, and until 1879, the estimates were made up by adding the annual gold product and the imports; deducting the exports and the amount estimated to have been used in the arts. After the year named, and to this day, the method employed differentiates United States coin from bullion and foreign coin; to the stock of coin estimated on hand at the end of the previous year are added the amount of the year's coinage and the imports of United States coin; from the total so obtained there are deducted the amounts of such coin exported, recoined and used in the arts; finally to the resulting sum is added the amount of bullion in the mint offices at the close of the year, thus giving an estimated total stock. No account is stated of the production and movement of bullion and foreign coin, which latter must for the purpose be regarded as bullion. It should be noted that substantially all bullion produced or imported finds its way into the mint offices; most of the foreign coin goes the same way; and the major part of any remainder is traceable to refiners who supply jewelers, goldsmiths, etc.; or through the custom houses when exported.

The results necessarily depend upon the correctness of the data; the figures showing mint operations are absolutely accurate; the returns of the commercial movements, while fairly reliable as a whole, have in the past been seriously inaccurate in classifying gold; both imports and exports of United States coin have been recorded as bullion or foreign coin. For a series of years the movement to and from Canada was only partially reported. The industrial consumption, in large part a matter of estimate, has despite great care, been underestimated in a number of years. These errors have seriously affected the correctness of the coin estimates; and had an annual account been kept of the bullion movement, the errors would very probably have been corrected.

It appeared also that considerable sums were taken out by our travelers abroad not offset by sums brought in by immigrants; the outgo being chiefly our own coin, and the income foreign coin, hence bullion.

*Finance Report 1885, p. lxxxvii *et seq*:—Political Science Quarterly, March, 1901, pp. 96-113. Report to Secretary of Treasury, 1901, not published, referred to in Finance Report, 1900, p. 237.

Taking for the purpose of illustration the primary method of estimating, using the data obtained from the official reports, we have the following:

Gold production 1874-1905	1494 millions
Imports of gold coin and bullion, 1874-1905	1386 millions
Total acquired	2880 millions
Exports of gold coin and bullion, 1874-1905	1386 millions
Leaving an addition of	1494 millions
Adding the estimated stock July 1, 1873	135 millions
Gives a total of	1629 millions
The estimated stock June 30, 1905, was	1358 millions
Which would leave	271 millions

as the amount used in the arts. But the Mint Bureau's estimate of this consumption of gold far exceeds the sum named, and that estimate is by no means adequate.

In discussing the industrial consumption in detail, allowance must be made for old material (jewelry, plate, watch-cases, etc.), melted down and used again. Both the mint offices and private refiners make use of such old material in providing manufacturers with gold bars; but the mint offices use some of the material thus converted for the general purposes (coinage, etc.).

The gross amount of gold used industrially may be placed at 475 millions for the period from July 1, 1873, to June 30, 1905; made up by taking the total of 410 millions for the calendar years 1880 to 1904, as given in the mint report for 1905, p. 41; adding 15 millions for the half year thereafter, and 50 millions for the period from July 1, 1873, to January 1, 1880. Of this amount about 75 millions was old material, and about 43 millions of old material was converted to general use. Thus the net loss by industrial consumption, based upon the reports, was 357 millions, or 86 millions more than the tentative table above given shows. In addition to this discrepancy there should be added about 25 millions for underestimate, substantially in coin; a contention which is at least in part admitted by the Mint Bureau (see Report, 1903, p. 42).

The estimate is subject to the following further changes: there should be added not less than 12 millions for coin exported to Canada not reported; and 16 millions for coin taken to the Philippine Islands (1899 to 1903) not reported; but a sum of 4 millions of coin in the Hawaiian Islands, now a part of the United States, should be included as an off-set. There is thus a net reduction in the gold stock of 135 millions, to which must be added the 29 millions referred to above for error in the original estimate, making a total of 164 millions, and leaving the total stock 1,194 millions instead of 1,358 millions.

The following table illustrates the argument; the coin estimate of the Mint Bureau is reproduced; a bullion account (including foreign coin as bullion) is given, based upon the data in the mint reports; and an estimate of total stock based upon both. The period covered is from July 1, 1873, to June 30, 1905:

The Acquisition and Displacement of Gold, 1874-1905.

(Amounts in millions of dollars.)	United States Coin	Bullion and Foreign Coin	Total Stock
Estimated stock July 1, 1873	119	16	135
Coinage during the period	1845	..	1845
Gold product during the period	..	1494	1494
Old material returned from arts, net	..	43	43
Old coin recoined	..	35	35
Imports	314	1072	1386
Hawaiian gold coin	4	..	4
Total acquired	2282	2660	4942
Exports	826	560	1386
Used in the arts	99	301	400
Sent to the Philippines	16	...	16
Used in coinage	35	1845	1880
Total displaced	976	2706	3682
Balance June 30, 1905	1306	—46	1260
Mint Bureau estimate June 30, 1905	1306	52	1358
Difference	....	98	98

There is not the slighest question but that the mint offices held the amount of bullion shown (52 millions); the detailed figures in the bullion account are hardly erroneous to the extent of the difference of 98 millions, except those giving exports and imports, which, as before stated, were frequently wrong in classifying the kinds of gold moved. It is therefore concluded that the difference is due entirely to these errors, and that the coin account should show a decreased balance of about 98 millions.

The estimate of the industrial use, as given, is considerably lower than the facts warrant. The difference is chiefly in the reported use of coin, the amounts of which should be increased, as already stated, by 25 millions. Adding to this sum the discrepancy in the original estimate, 29 millions, and a conservative amount for the loss of coin to Canada (12 millions), a total of 66 millions should be added to the discrepancy shown in the above account. In short the estimated gold stock should be reduced by 164 millions, as has been done in the figures appended to the tables.

In July, 1907, the Director of the Mint published his conclusions, reaching a most conservative result, as follows:

THE MINT BUREAU'S COMMENTS ON THE REVISION.

Among the most intelligent and well-informed of the critics has been Mr. Maurice L. Muhleman, for many years an official of the Treasury Department. He has several times reviewed the estimates and given cogent reasons for believing them too high. The Director of the Mint has been satisfied for several years that errors had crept into the estimates, but has preferred not to announce a revision until all sources of information had been exhausted. He is now ready to make the changes submitted below.

ERROR IN ORIGINAL ESTIMATE.

The first error to be noted is one discovered by Mr. Muhleman in Dr. Linderman's original estimate of the stock in the country June 30, 1873. The stock of gold actually in the Treasury on that date, after various "coin items" are eliminated, was only $71,188,548; the stock of "specie" in national banks at the nearest statement thereto was $4,818,086. The latter included some silver coin. The nearest date for which the stock of silver coin in banks is obtainable is June 30, 1876, when it was $1,472,507. It seems probable that there was silver coin to the amount of $1,000,000 in the banks on June 30, 1873, which would make their gold holdings $3,818,086. Adding the $30,000,000 estimated by Dr. Linderman as the amount in the hands of other banks and the public, the total in the country on that date would be $105,006,634, instead of $135,000,000. This difference is undoubtedly due to Dr. Linderman's having included certain "coin items," such as bonds, in his figures for gold in the Treasury.

ERRORS IN IMPORTS AND EXPORTS.

There being no duty upon gold bullion or coin it naturally follows that customs officials are not as particular to verify the accuracy of declarations as they would otherwise be. If a shipment of gold bullion or foreign gold coin should be accidentally entered at a custom house as United States coin, it would be taken up in the statistics as an addition to the stock, but the same shipment would probably go directly to some office of the mint service, and, after coinage, be added to the stock again, thus effecting a duplication. Having occasion to suspect that this had actually occurred, clerks were set at work to trace the entries at the New York custom house and compare them with the entries of foreign coin and bullion at the United States Assay Office in New York City. The result was the discovery of such duplications to an aggregate of $23,404,710, and it is thought there is warrant for raising this by estimate to $30,000,000.

THE CANADIAN FIGURES.

The custom house figures for the movement of United States gold coin between this country and Canada evidently do not tell the whole story. They show in the period under review a balance against this country of $15,115,689, while the stock of United States gold coin in the Dominion treasury and in the chartered banks increased in the same period from about $5,000,000 to $43,914,154. It is safe to estimate the loss to Canada in excess of the custom house records at $25,000,000. Canada, it should be understood, during these years has had no gold coinage of its own, and United States gold coin is a legal reserve against its bank notes.

COIN CARRIED BY TRAVELERS.

It has been assumed that coin carried out of the country by travelers was usually brought back in the same manner, but the probabilities are that some of it is melted down abroad and finally lost to our circulation. Inquiries covering this phase of the subject have been addressed to all our Consular officials in foreign countries and replies received. The reports indicate that less coin is carried away in recent years than formerly, but that an allowance should be made. These losses since 1873 are estimated at $20,000,000.

INDUSTRIAL USE.

A revised estimate of the amount consumed in industrial consumption,

based upon the more definite information obtained in recent years, raises previous estimates by the sum of $25,000,000.

TOTAL DEDUCTIONS.

Summing up the deductions of $35,000,000 prior to 1880, $30,000,000 in customs entries, $25,000,000 for the Canadian movement, $25,000,000 for industrial consumption, and $20,000,000 for the unrecorded exports, a total of $135,000,000 is reached. This sum taken from amount in other banks and in circulation on June 30, 1906, would leave that estimate at $225,703,384. Bringing the calculation down to June 1, 1907, and making the deductions, gives a total stock of gold coin and bullion (in the mints) of $1,484,845,280, of which $1,109,458,330 is held by the Treasury and national banks. (See also Report Director of Mint, 1907, pp. 66-92.)

Prior to the publication of the above the Director had been inclined toward a larger deduction, but finally concluded to adopt the more conservative figure. There are reasons, as intimated above, for the opinion that the figure is *too* conservative.

The deductions have not been distributed by years by the Mint Bureau, only the total for 1907 having been changed. This leaves the data for prior years erroneous. The writer has, however, allotted to each year the amount of the over-estimate properly chargeable thereto, according to his own calculations.

Returning now to the examination of the statistics of the monetary stock from 1891 to 1907, the table showing the total supply of which has already been given above (*A*).

The second section of the table (B) gives the amounts of money in circulation, including bank holdings and the amounts per capita.

B.—The Amounts in Circulation (Outside the Treasury).

End of Fiscal Year	Gold Coin	Silver Dollars	Subsidiary	Total Coin	Gold Certificates	Silver Certificates	U. S. Notes	Currency Certificates	Treasury Notes	National Bank Notes	Total Paper	Aggregate	Per Capita	Population
1891.....	407	59	58	524	121	307	321	22	40	162	973	1497	$23.42	64.0
1892.....	409	57	63	529	141	327	309	30	98	167	1072	1601	24.56	65.2
1893.....	408	57	65	530	93	327	319	12	141	175	1067	1597	24.03	66.5
1894.....	496	53	58	607	66	327	267	59	135	200	1054	1661	24.52	67.7
1895.....	480	52	60	592	48	320	264	55	116	207	1010	1602	23.20	69.0
1896.....	455	52	60	567	42	331	224	32	95	215	939	1506	21.41	70.4
1897.....	518	52	60	630	37	358	246	61	83	225	1010	1640	22.87	71.7
1898.....	658	58	64	780	36	390	285	26	98	223	1058	1838	25.15	73.1
1899.....	680	61	69	810	33	402	308	20	93	238	1094	1904	25.58	74.4
1900.....	611	66	76	753	201	408	314	4	75	300	1302	2055	26.94	76.3
1901.....	630	67	79	776	247	430	330	—	47	345	1399	2175	27.98	77.8
1902.....	632	69	86	787	306	447	334	—	30	345	1462	2249	28.43	79.1
1903.....	617	72	93	782	377	455	334	—	19	400	1585	2368	29.42	80.5
1904.....	646	71	95	812	466	461	334	—	13	433	1707	2519	30.77	81.9
1905.....	651	74	102	827	485	455	332	—	9	480	1761	2588	31.08	83.3
1906.....	669	77	112	858	517	471	336	—	7	548	1879	2737	32.32	84.7
1907.....	697	82	122	901	600	470	343	—	6	589	2008	2909	33.79	86.1

The revised estimate of the gold stock gives the following amounts in circulation:

1891.....331	1896.....351	1901.....482	1906.....505
1892.....330	1897.....405	1902.....480	1907.....532
1893.....329	1898.....535	1903.....463	
1894.....408	1899.....554	1904.....488	
1895.....382	1900.....470	1905.....487	

Comparing the totals for 1891 with those for 1890, in the preceding series of tables, it will be noted that there was a marked increase in the amount of money in circulation, although the total stock had diminished. This was due to very large disbursements of the excessive Treasury surplus, during a stringency in the fall of 1890, which was accomplished by the purchase by the government of bonds not due, at high premiums; as much as 130 was paid for some of the bonds, and fully 70 millions was so disbursed. Nevertheless banks were compelled to use clearing-house certificates to help out the lack of currency.

The great increase of gold in circulation, taking into consideration the gold certificates, is gratifying; of course the larger part was continuously in bank reserves. The preference of the people for paper currency is shown by the large increase in the use of gold certificates when the issue was resumed in 1900; also in the use of silver certificates instead of dollars, notwithstanding the fact that the government delivers the dollars free of transfer charges. The United States notes were for the greater part of the time in actual use nearly to the statutory limit of amount; currency certificates should of course be included in this comparison until their disappearance after the law of 1900. The Treasury notes which first came into existence at the beginning of this period began to disappear after the repeal of the silver purchase law in November, 1893, being redeemed with silver dollars coined from the bullion they had paid for; silver certificates were subsequently issued upon the dollars. National bank notes reached the lowest point in volume in 1891; thereafter, the growth was slow until after the encouraging law of 1900, when the increase was rapid. Since the last-named date the per capita amount of money reached a new normal stage,—nearer $30; it has probably been excessive recently.

A noteworthy feature, as an unfailing index of improved business conditions, is the largely increased use of subsidiary silver coin.

The results of the panic of 1893 and the depression following, are more intelligently illustrated by the section (C) relating to the money in the Treasury.

The crisis was due largely, but not entirely, to the silver legislation of 1890; other legislation of that year cut down government revenues by about 50 millions and increased expenditures by a similar amount, which caused a deficit in revenues in 1893. Tariff agitation was also before the people. Altogether these influences brought about a period of depression and extraordinary fall in prices (noted elsewhere), which lasted for four years.

C.—The Amounts in the Treasury.

End of Fiscal Year	Total	Held for Certificates, Etc.	Net Owned	Gold	Silver *	Subsidiary	Certificates		U. S. Notes	Treasury Notes	Bank Notes	Free Gold	Ratio of Free Gold to	
							Gold	Silver					Govt. Notes†	All Paper‡
1891.....	720	539	181	87	15	20	32	8	3	10	6	119	31.1%	13.9%
1892.....	770	620	150	98	1	14	16	5	7	4	5	114	26.0	12.2
1893.....	726	584	142	95	3	12	1	5	16	6	4	96	20.3	9.8
1894.....	759	615	144	65	5	18	—	10	21	18	7	65	14.1	6.7
1895.....	796	579	217	108	21	17	—	9	27	30	5	108	24.8	11.2
1896.....	843	548	295	102	27	16	1	12	91	35	11	103	29.4	11.4
1897.....	856	590	266	139	15	16	2	17	40	32	5	141	36.2	14.5
1898.....	800	564	236	166	3	12	2	9	36	3	5	168	41.1	16.4
1899.....	841	554	287	249	3	6	1	4	19	1	4	250	59.4	23.6
1900.....	1009	724	285	195	9	7	27	7	29	1	10	222	56.5	20.1
1901.....	1082	772	310	206	20	11	42	5	17	—	9	248	65.6	21.5
1902.....	1146	830	316	214	21	11	40	7	12	—	11	254	69.7	21.9
1903.....	1213	893	320	222	20	9	32	10	13	—	14	254	71.9	21.0
1904.....	1265	978	287	187	21	12	29	9	13	—	16	216	62.2	17.4
1905.....	1291	993	298	189	23	13	33	10	14	—	16	222	64.7	17.3
1906.....	1379	1045	334	247	8	6	43	6	11	—	13	290	85.0	21.3
1907.....	1506	1160	346	226	9	9	78	6	4	—	14	305	87.3	21.8

Note—The money owned by the Treasury as here stated does not represent the Treasury balances proper.

*Includes bullion in Treasury in process of coinage, not always included in some of the Treasury tables. †U. S. notes, Treasury notes and currency certificates. ‡Includes all paper except gold certificates, which are fully covered.

The ratio of gold to all paper has never again touched the high point of 1888, viz.: 25.7%; for although gold increased, the paper issues increased in larger measure.

The increase of government notes, which were made a charge upon the gold reserve without increasing the latter, coincident with a declining revenue which soon turned a surplus into large deficits, shook confidence, and the relative inflation of paper currency caused exports of gold. The metal was drawn from the Treasury and soon its reserve was impaired; the issue of gold certificates was suspended, and the crisis followed. To replenish the reserve, bonds were issued to purchase gold; some of these were negotiated at rates under 5 per cent. premium, whereas in 1890 the Treasury had redeemed some of the same class at nearly 30 per cent. premium. In all $262,315,400 bonds at 4 per cent. and 5 per cent. were issued; but a large part of the proceeds, after redeeming notes therewith, had to be applied to cover deficits in revenue, which in the four years, 1894-7, amounted to fully 156 millions. The loss of gold and the retirement into the Treasury of such of the redeemed notes as could be held, brought the money in circulation sharply down by 1896.

The disturbances caused a money stringency which rendered it necessary for the people to provide themselves with other means to make exchanges; banks issued clearing-house certificates, some as low as fractions of a dollar; for a while all forms of actual money were at a premium, and every effort was made to provide additional supplies, as is shown on another page.

In the year 1897 came the turning point; in 1898 the Treasury balance was decreased by war expenses, and with an accretion of 140 millions of gold, the aggregate circulation was increased nearly 200 millions, the greatest since the resumption year. The increase has since been steady, particularly after the gold standard law of 1900 created a demand for gold by increasing the gold reserve to 150 millions. The legal status of all forms of money except gold, subsidiary coin and bank notes, causes the sums in use to remain fixed; hence additions to the supply must come, as has been the case in recent years, through the three classes of money named.

Denominations of Paper Currency.

The denominations of our money should also be considered; it has been noted that the issue of small silver certificates aided in floating the excessive dollar supplies. Indeed, to an extent, almost any *convenient* form of divisional money, not in excess of demand, can be floated. The issue of $1 and $2 national bank notes was abrogated nearly thirty years ago; in the eighties the use of these denominations of United States notes was diminished; in the nineties the Treasury notes were used; the silver certificates now occupy this field almost exclusively, and satisfactorily in view of the largely increased demand. With national bank notes the silver certificates now also supply the need for $5 denominations. The accompanying table D gives the statistics bearing upon the subject, small denominations being separately classified.

D.—The Denominations of Paper Money.
(In millions of dollars.)
1. *Retail Money, 1s to 20s.*

End of Fiscal Year	1s and 2s			5s				10s				20s			
	Silver Certificates	Other Forms*	All	Silver Certificates	Bank Notes	Other Forms†	All	Silver Certificates	Goverment Notes	Bank Notes	All	Gold Certificates	Bank Notes	Other Forms‡	All
1891...	48	13	61	110	47	68	225	110	109	53	272	14	41	151	206
1892...	44	21	65	102	50	85	237	111	123	54	288	12	41	169	222
1893...	39	32	71	94	51	99	244	107	135	57	299	9	43	178	230
1894...	38	29	67	88	61	87	236	105	125	66	296	7	49	184	240
1895...	44	26	70	88	64	94	246	98	121	66	285	6	49	173	228
1896...	45	28	73	94	71	101	266	106	124	69	299	5	51	154	210
1897...	49	27	76	102	73	92	267	113	115	71	299	5	53	150	208
1898...	50	32	82	109	71	96	276	126	109	71	306	5	53	159	217
1899...	64	25	89	107	74	106	287	126	121	75	322	4	56	170	230
1900...	83	14	97	114	75	104	293	133	127	109	369	55	79	151	285
1901...	96	8	104	176	62	67	305	106	153	140	399	83	101	121	307
1902...	108	6	114	234	55	39	328	71	206	144	421	116	107	92	315
1903...	124	5	129	264	62	23	349	47	242	172	461	157	127	68	352
1904...	126	5	131	282	63	15	360	38	251	189	478	170	142	56	368
1905...	138	5	143	285	68	11	364	24	269	211	504	174	159	42	375
1906...	148	5	153	299	77	9	385	17	279	240	536	198	181	33	412
1907...	163	4	167	290	114	7	411	12	287	247	546	251	184	26	461

*Treasury notes predominated. †United States notes predominated. ‡United States notes and silver certificates predominated.

By reference to other portions of the table it will be seen that the volume of the smallest denominations cannot be very largely increased by means of silver certificates; the banks are permitted by the law of 1900 to increase their emission of fives; and in 1907 authority was given to use gold certificates of $10 denominations (for the first time); and other means for enlarging the supply of ones, twos and fives are being considered. It is by no means certain, however, that the present supply may not prove excessive when a reaction in business takes place, as is likely to occur after the recent disturbances. It will then be necessary for the Treasury to absorb and carry small silver certificates for a time.

2.—*Wholesale Money* (50s *to* 10,000s) *and General Results.*

End of Fiscal Year	50s and 100s					500s and over				Small Notes		Large Notes		Small Notes per Capita
	Gold Certificates	Government Notes	Bank Notes	Silver Certificates	All	Gold Certificates	Government Notes	Other Forms	All	Amount	Per Cent. of Paper	Amount	Per Cent. of Paper	
1891.....	21	54	25	12	112	117	32	5	154	764	74.1	266	25.9	$11.96
1892.....	18	53	26	27	124	127	43	2	172	813	73.3	296	26.7	12.47
1893.....	13	46	27	33	119	72	61	2	135	844	76.9	254	23.1	12.69
1894.....	10	51	30	37	128	49	94	1	144	839	75.6	271	24.4	12.39
1895.....	9	45	31	30	115	34	102	1	137	829	77.3	252	22.7	12.01
1896.....	8	45	33	34	120	30	88	—	118	848	78.0	239	22.0	12.04
1897.....	7	43	33	44	126	27	103	—	130	850	76.8	256	23.2	11.85
1898.....	7	42	33	32	114	26	92	—	118	881	79.1	232	20.9	12.05
1899.....	7	39	35	28	109	24	62	—	86	928	82.7	195	17.3	12.47
1900.....	41	38	47	20	146	131	54	1	186	1044	75.9	332	24.1	13.68
1901.....	45	36	50	12	143	160	53	—	213	1115	75.7	356	24.3	14.35
1902.....	57	29	50	8	144	174	40	—	214	1177	76.9	357	23.1	14.88
1903.....	77	20	51	6	154	176	34	—	210	1290	78.0	364	22.0	16.02
1904.....	86	18	54	6	164	239	34	—	273	1336	76.4	437	23.6	16.31
1905.....	102	14	57	5	178	241	31	—	272	1385	75.5	450	24.5	16.62
1906.....	107	12	62	3	184	254	29	—	283	1485	76.1	467	23.9	17.53
1907.....	121	10	58	3	192	306	27	—	333	1586	75.4	525	24.6	18.42

The very large increase in the proportion of small notes in 1899 was actually due to the absence of gold certificates, and made the use of coin by banks necessary.

Bank notes are used very largely in the $10 and $20 denominations, government notes more particularly in the former, gold certificates predominating in the latter; by far the greater part of the currency of $50 size and upward is in gold certificate form. The supply of large denominations is generally used for bank reserves; apparently it has not been sufficient for this purpose.

The ratio of small denominations has, as will be seen, been maintained at over 75 per cent. of the total paper since 1892. The great increase in large gold certificates in recent years renders the ratio measurement unreliable, however; the fact that the small note supply is at $18.42 per capita, by far the highest on record, indicates that the limit has probably been reached. This is in part verified by the data in the next table (E) relating to the

Location of the "Money in Circulation."

Statistics of the cash held by banks other than national are far from accurate; but in a measure they serve our purpose. Based upon the returns of all banks, an estimate has been prepared of the probable holdings of gold coin in these institutions. (Gold clearing house certificates being treated as coin; gold Treasury certificates not.) There is thus obtained an approximate estimate of the gold and other money actually in circulation, supposed to be in the people's hands. Here the deductions for overestimates have been introduced each year. The figures giving silver coin in use are very nearly correct, since banks carry little of such coin. The estimate of gold in the people's hands seems large even after making the deductions; yet the returns do not warrant a material increase in the amount estimated to be held by banks.

E.—Location of the Supply of Money in Circulation.

(In millions of dollars.)

Years	Money in Banks			Money in the People's Hands									Small Money Supply ‡ Per Capita
										Per Capita			
	All	Gold Coin*	Other Forms	All	Revised †	Gold Coin*	Other Forms	Silver Coin	Paper	Revised Total	Gold	Silver	
1891..	479	156	323	1018	941	175	766	117	649	$14.72	$2.74	$1.83	$16.53
1892...	586	160	426	1015	937	170	767	120	647	14.37	2.61	1.84	16.92
1893...	516	155	361	1081	1001	174	827	122	705	15.06	2.61	1.83	17.13
1894...	689	215	474	972	884	193	691	111	580	13.06	2.85	1.64	16.88
1895...	631	200	431	971	874	182	692	112	580	12.67	2.64	1.62	16.27
1896..	532	190	342	974	870	161	709	112	597	12.43	2.29	1.60	15.93
1897..	628	250	378	1012	900	155	745	112	633	12.55	2.16	1.56	15.57
1898..	688	365	323	1150	1027	170	857	122	735	14.07	2.32	1.67	16.04
1899..	723	390	333	1181	1055	164	891	130	761	14.18	2.20	1.75	16.42
1900..	750	300	450	1305	1165	170	995	142	853	15.27	2.23	1.86	17.77
1901..	795	297	498	1380	1232	185	1047	146	901	15.85	2.38	1.88	18.61
1902..	838	289	549	1411	1259	191	1068	155	913	15.92	2.41	1.96	19.25
1903..	848	267	581	1520	1365	196	1169	165	1004	16.96	2.44	2.05	20.43
1904..	983	285	698	1536	1378	203	1175	166	1009	18.82	2.48	2.03	20.82
1905..	988	264	724	1600	1436	223	1213	176	1037	17.26	2.68	2.11	21.41
1906..	1011	265	746	1726	1562	240	1322	189	1133	18.44	2.83	2.23	22.59
1907..	1107	275	832	1802	1637	257	1380	204	1176	19.01	2.98	2.37	23.77

* Estimates of the author: as to amount in people's hands 1907, still 30 millions less than the official estimate.

† After deducting over-estimate of gold.

‡ Small note supply, gold and silver in people's hands combined.

Note.—Prior to 1896 the official return of money in banks (first column), includes substantial sums of "cash items" in state banks; it is impracticable to correct this; hence the results, as well as the deductions throughout for those years are inaccurate.

We thus reach an estimate of the paper currency in use, which shows that a very substantial part of the supply of small notes must be located in the banks. In 1907 the amount was apparently over 400 millions, or less than the amount of twenties provided; this sum would give for say 20,000 banks an average of only $20,000 to each, not by any means large. It is to be noted also

that the cash holdings of the banks above the gold coin indicate that the large note supply is very considerably less than the paper currency in banks.

The enormous expansion in business has made it possible to extend the actual circulation of silver beyond the formerly assumed limit of $2 per capita; if a reaction ensues there will be a reduction even greater relatively than that which followed the troubles of 1893.

This estimate of money in people's hands is entirely that of the author; its approximate correctness is indicated in part by the similarity of the fluctuations per capita with those of the silver coin; as before stated the use of this coin is quite accurately shown by official figures and the results per capita are hence also reliable.

The data bearing upon the

Supply of and Demand for Money Means

would be incomplete without giving consideration to the use of checks, by which fully 90 per cent. and at times 95 per cent. of the volume of our business

F.—Statistics Bearing Upon the Supply of Money Means and Bank Reserves.

(In Millions of Dollars.)

Years	Commercial Banks			Deposits and Money in People's Hands		Loans and Money in People's Hands		Excess Per Capita		Bank Reserves	
	Deposits		Loans in All	Amount	Per Capita	Amount	Per Capita	Loans &c.	Deposits &c	Amount *	Per Cent. to Deposits
	National	Others									
1891.....	1535	1010	2987	3563	$55.76	4005	$62.68	$6.92	.....	451*	17.7
1892.....	1753	1153	3313	3921	60.23	4328	66.49	6.26	.....	555*	19.1
1893.....	1557	1262	3322	3900	58.65	4403	66.21	7.56	.....	481*	17.0
1894.....	1678	1195	3058	3845	56.79	4030	59.53	2.74	.....	649*	22.6
1895.....	1736	1341	3233	4048	58.66	4204	60.92	2.26	.....	593*	19.2
1896.....	1668	1341	3196	3983	56.59	4171	59.25	2.66	.....	497	16.5
1897.....	1770	1341	3150	4123	57.50	4162	58.05	1.94	.....	586	18.8
1898.....	2023	1636	3581	4809	65.79	4731	64.72	....	$1.07	655	17.9
1899.....	2522	2064	4079	5767	77.51	5260	70.70	....	6.81	688	15.0
1900.....	2458	2388	4489	6151	80.60	5794	75.93	....	4.67	718	14.8
1901.....	2942	2991	5203	7313	94.00	6583	84.61	....	9.39	762	12.8
1902.....	3099	3341	5902	7851	99.13	7313	92.45	....	6.66	807	12.5
1903.....	3201	3520	6375	8241	102.37	7895	98.07	....	4.30	817	12.2
1904.....	3312	3750	6549	8598	104.98	8085	98.72	....	6.26	958	13.6
1905.....	3784	4456	7425	9834	118.05	9019	108.27	....	9.78	960	11.6
1906.....	4056	4840	7996	10622	125.41	9722	114.78	....	10.63	985	11.1
1907.....	4323	5259	8905	11249	130.65	10572	122.79	....	7.86	1079	11.3

* These amounts to 1895 are somewhat excessive because the sums carried by state banks as "cash items" are included, in the reports, as cash. The sum to be deducted is not ascertainable. This causes a faulty result, including the estimate of money in people's hands for these years.

Note.—In this table the money in people's hands as per official reports is used, and not the revised amount in the preceding table. The results would not vary materially per capita, relatively.

is carried on. The specific statistics as to the ratio are brought together in the chapter dealing with the Clearing House System (*post*).

The potential volume of check money is the sum of deposits in commercial banks, *i. e.*, exclusive of savings banks; the utilization of the deposits is approximately indicated by the loans; in practice loans become deposits against which the borrower draws checks; deposits are limited in a measure by the reserve requirements fixed by law; the amount of actual cash in bank must bear at least a certain fixed ratio (5 per cent. to 25 per cent.) to the deposits, and loaning must be restricted if it fall below. Thus loans are also limited by the reserve laws.

The deposits and money in people's hands serve as an approximate indication of the general conditions of supply of means; the loans plus money in actual use as stated, bear upon the movement of demand. The statistics (table F) show that the supply of means thus measured has in recent years been considerably in excess of demand so far as that is indicated. The deposit means, in other words, are far in excess of the loans, but have been accompanied by a shrinkage in the reserves.

We have thus evidence of defects in our system relating to the distribution of facilities. The excess of loanable means should have provided an abundant supply and lowered interest rates. Yet there appears to have been a lack of supply at certain points. The subject is discussed in greater detail in a subsequent chapter; the indications are that the anomalous condition is due, in part at least, to the inelasticity of volume of our paper currency; the omission to contract when the demand lessens.

Loss on Destroyed Paper Currency.

Reference was made, on a preceding page, to the loss of paper currency by total destruction. Undoubtedly large amounts of the smaller notes of the earlier issues, particularly those used to pay troops, have entirely disappeared. This is not, however, true of the larger denominations.

Experience indicates that almost all of the large notes will eventually be presented, since these are naturally subjected to less use, and are held chiefly in reserves; in some cases the same notes are so held for a long period. The first issue of gold certificates, of which there were very few of the denomination of $20, may properly be considered a fair instance whereby to estimate the probable destruction of large notes. The issue amounted to $980,000,000, and continued from 1863 to 1878. At the close of 1892 only $182,000 were outstanding, of which $162,000 were in notes of $1,000 and over, represented by sixty-six pieces.

The following table shows the amount of United States notes of the issues which preceded the one now in use, remaining unredeemed, and the proportion, to the total issue, of the large and small notes separately. The statement is brought down to the close of the fiscal year 1892, after which year the data are not published:

Unredeemed United States Notes, 1892.
(Amounts in millions.)

Issue	Small		Large		Total		Outstanding, Per Cent.		
	Issued	Out-standing	Issued	Out-standing	Issued	Out-standing	Small	Large	Total
1st, 1862–1870....	384	6.7	285	0.9	669	7.6	1.7	0.3	1.1
2d, 1869–1877....	302	4.9	192	1.9	494	6.8	1.6	1.1	1.4
3d, 1875–1877....	36	0.2	52	1.1	88	1.3	0.5	2.1	1.5
4th, 1875–1879....	144	2.6	47	2.1	191	4.7	1.8	4.5	2.5
5th, 1878–1884....	113	3.2	127	5.1	240	8.3	2.8	4.	3.5
Total.....	979	17.6	703	11.1	1,682	28.7	1.8	1.6	1.7

The destruction of large notes can hence not have been important in amount.

It is otherwise with respect to the small denominations, especially when the large amount of the earlier issues remaining unredeemed (over $11,500,000) is considered. The amount of the annual redemption of these is rapidly diminishing, so that only a fraction of 1 per cent. of the outstanding is presented each year. The eventual gain therefore from the total disappearance of the small notes may be placed at $8,500,000, an amount somewhat less than 1 per cent. on the aggregate of these denominations issued prior to 1885.

For the reasons given (the vicissitudes of war, etc.), this cannot be regarded as an indication of the gain on all note issues; in fact, the statistics of redemptions of notes of national banks that have failed, lead to the belief that the average will barely reach ½ of 1 per cent. on the total issue.

As to the average life of notes, recent calculations indicate that small denominations have about 1½ years, while large notes serve for fully 4 years.

It is very difficult to estimate the volume of the minor coins in circulation. Reference to the coinage statistics will show that of the pieces now current about $34,000,000 have been coined, leaving about $5,500,000 of other pieces. The latter may be practically eliminated from consideration, very nearly all having been retired. Large amounts of the current issues have also been retired in a worn or defaced condition, and it is roughly estimated that not more than $25,000,000 are now in use.

The Money Expansion in Two Panic Periods.

It is interesting to record the movement of the money supply during the two periods of panic, 1893 and 1907, when hoarding became active and all forms were quoted at a premium. The following table furnishes the details as to money in circulation and banks as officially reported. It should be borne in mind that in 1893 the Treasury was unable to provide assistance, since it was itself in very serious straits.

As has already been stated the Treasury effected the increase of cash available for business by depositing surplus revenues in national banks, against bond security, in 1907.

Expansion During Panics.
(In Millions of Dollars.)

	1893			1907		
	June 30	Sept. 30	Increase	Sept. 30	Dec. 31	Increase
Gold Coin and Certificates	497	564	67	1202	1355	153
Silver Coin and Certificates	448	448	..	671	694	23
Government Notes	474	489	15	349	351	2
Bank Notes	175	201	26	584	679	95
Total	1594	1702	108	2806	3079	273

In 1893 practically all of the gold was imported; in 1907 about 100 millions came from abroad, the remainder from the Treasury, which also gave up other forms of money. A substantial part in both periods was supplied by bank notes. The records show that the volume of small notes was increased 41 millions in the earlier period and 152 millions in that just passed.

Only approximations of the amount of money hoarded during these panic periods can be given, since bank reports do not correspond in dates with the periods of the hoarding.

In 1893 the estimate ran from 100 millions to 150 millions; the New York City banks lost between May and August 58 millions in addition to 35 millions of gold imported. Interior banks unquestionably lost less.

In 1907 New York City banks gained from the Treasury between October 19 and December 31 about 46 millions; imported gold 85 millions; of their own notes they issued 20 millions; total 151 millions; yet their reserves were 24 millions lower at the end of the period than at the beginning, indicating a loss of 175 millions. Interior banks lost less, but the hoarding was much more marked in the metropolis than elsewhere. Estimates of the total hoarding run from 200 to 300 millions. National banks in the rest of the country reported no loss of cash between August 22 and December 3 reports; they hence used only the amounts received from the banks in the center, and their own increased circulation and government deposits, which amounted to about 72 millions, approximately half from each source.

From the general returns (October 19 to December 31), the following figures are obtainable: Treasury deposits in banks increased 82 millions; gold imports amounted to 106 millions; our own gold product was probably 12 millions; national bank issues were expanded 81 millions; a total of 281 millions. It is questionable if bank reserves were restored to the sum held at the beginning of the period, by as early a date as December 31. It is hence probable that the money in people's hands actually increased fully 300 millions, if not appreciably more.

When the crisis had passed in 1893 the money returned to the banks in large volume, and the greater part moved to the centers. Thus the reported cash in all banks from about June, 1893 to about June, 1894, increased 173

millions (see table *ante*); New York City banks gained exactly that amount between August, 1893, and February, 1894.

A similar return movement began in January, 1908, and by May the New York City banks had gained 131 millions of cash, although in the interval they had turned into the Treasury fully 25 millions of public money for themselves and interior banks; also they had provided 15 millions of gold for export. The movement still goes on.

MOVEMENTS OF MONEY.

Certain data useful in the study of the movement of money affecting the general supply, are given in the table following. The Treasury's balance, estimated after deducting demand liabilities such as checks out, etc., and the portion thereof located in depositary banks, at the end of each year; the gold product (converting the data for calendar years already stated into approximate estimates by fiscal years by taking the means); the import and export of gold; the volume of redemptions of paper currency of each class, which refers more especially to the redemptions followed by reissues of new notes; and finally the proportion of national bank notes redeemed to the average amount in existence each year. The last-named figures have a bearing upon the subject of elasticity of volume of all money, since the bank notes are the chief medium for expansion, aside from gold.

Movements of Money in General.

(In Millions of Dollars.)

Fiscal Years	Treasury Balance *		Gold				Paper Currency Redemptions					Per cent. Bank Notes to Average Out
	Total	In Banks	Product †	Import	Export	Gain + Loss —	Gold Certificates	Silver Certificates	U. S. Notes	Treasury Notes	Bank Notes	
1891.....	157	21	33	18	86	— 35	69	72	71	2	67	38.34
1892.....	129	10	33	50	50	+ 33	66	93	66	9	70	40.45
1893.....	125	10	34	21	109	— 54	77	111	91	42	76	43.40
1894.....	119	10	38	73	77	+ 34	27	124	91	46	105	51.30
1895.....	196	11	43	35	66	+ 12	18	123	75	51	87	41.71
1896.....	270	11	50	32	112	— 30	5	140	69	62	108	49.85
1897.....	244	12	55	85	40	+ 100	4	146	60	45	114	48.76
1898.....	209	34	61	120	15	+ 166	1	151	54	43	97	42.56
1899.....	284	70	68	89	38	+ 119	3	144	88	38	91	37.96
1900.....	307	93	75	45	48	+ 72	24	162	81	33	97	37.25
1901.....	328	93	79	66	53	+ 92	53	182	92	28	147	43.39
1902.....	362	117	79	52	49	+ 82	72	217	101	18	172	47.98
1903.....	389	140	77	45	47	+ 75	106	262	110	11	196	51.26
1904.....	322	104	77	99	81	+ 95	130	307	123	6	262	61.12
1905.....	295	65	84	54	93	+ 45	171	322	127	4	308	65.84
1906.....	331	81	88	96	39	+ 145	159	309	108	2	296	55.07
1907.....	422	167	91	114	51	+ 154	170	306	105	1	240	40.77

*At end of year. †Means of calendar years.

The indicated net gain of gold is 1105 millions; from this must be deducted the amounts used in the arts and loss by unrecorded movements, which will bring the result in correspondence with the statistics of the supply.

THE CLEARING-HOUSE SYSTEM

THE NEW YORK CLEARING-HOUSE—TRANSACTIONS OF CLEARING-HOUSES—USE OF CREDIT INSTRUMENTS—CLEARING-HOUSE LOAN CERTIFICATES.

The clearing-house system is a most simple device for making exchanges of bank checks, etc., with the minimum of labor and risk.

Banks in the larger cities of the United States and in a number of cities in Europe as well, are organized for the purpose of thus facilitating the settlements between them, each bank bearing its share of the expense, which, compared with the cost of collecting checks, is very small.

For example, in New York, all of the principal banks are thus associated; practically all of the banks of the city "clear," but the smaller ones and some trust companies do so through some member of the association.

Each bank sends to the institution all of the checks it has received up to about 9.30 o'clock in the morning and delivers them to the representatives of the banks upon which they are drawn; by this process a "settling clerk," representing his respective bank, is enabled to prepare in a very short space of time, a sheet showing the amounts for which his bank is to be charged, and the amounts his bank is to be credited with. He then strikes a balance, which he transmits to the manager of the institution, present at the daily settlement. The manager's clerk prepares the general balance sheet. Obviously some banks will appear creditors and others debtors, but the totals of the accounts will balance unless an error has been made.

The process begins at exactly 10 o'clock A. M., and unless errors occur the balance is struck by 10.30 o'clock. A system of fines for tardiness, errors, etc., serves to bring about exactness.

All banks appearing as debtors on the balance sheet are required to furnish the manager with the amounts due by them not later than 12.30 o'clock, and by 1.30 o'clock the manager begins to pay to the creditor banks the amounts due them. It follows that he never carries over any funds.

In this manner it frequently occurs that checks representing $150,000,000 are settled by the handling of only $5,000,000 of actual money. The average amount of cash required is actually under 5%, for a series of years. It is only when one bears in mind that under the former system $150,000,000 of cash would have to be carried through the streets of New York, that the reduced risk of this system can be appreciated.

But the system goes farther in reducing chances of loss. Moneys are deposited in charge of a clearing-house committee, which issues certificates payable to order and to be regarded as cash only between the banks represented in the institutions; and so far as the certificates are used, the chance of loss or fraud is materially lessened. In some clearing-houses settlements are made by drafts of the managers against debtor banks in favor of creditor banks.

The returns of the transactions of the clearing-houses are regarded a satisfactory index of the volume of business of the country, since the operations represent, in a general way, the aggregate of wholesale and part of the retail business. Since, however, the returns for New York City also include the enormous operations of the stock exchanges, those for the cities outside of New York are considered a more satisfactory index of general business conditions. In the table following the exchanges of the clearing-houses of the United States are thus separated; and for purposes of comparison there are included the exchanges of the similar institutions in London and Paris.

Clearing-House Exchanges.

Calendar Years	New York Million $	Other U. S. Million $	London Million £	Paris Million frs.	Calendar Years	New York Million $	Other U. S. Million $	London Million £	Paris Million frs.
1879...	29,235	9,291	4,885	2,628	1894...	24,388	21,072	6,337	5,379
1880...	38,615	11,375	5,794	3,223	1895...	29,842	23,339	7,593	6,143
1881...	49,377	14,094	6,357	4,084	1896...	28,871	22,375	7,575	7,351
1882...	46,916	13,962	6,221	4,545	1897...	33,427	23,802	7,491	7,459
1883...	37,434	14,265	5,929	4,159	1898...	41,971	26,855	8,097	8,546
1884...	30,985	13,179	5,798	4,219	1899...	60,761	33,286	9,130	9,567
1885...	28,152	13,287	5,511	4,142	1900...	52,634	33,436	8,960	10,656
1886...	33,676	15,571	5,902	3,924	1901...	79,428	38,982	9,561	10,664
1887...	33,474	17,617	6,077	4,392	1902...	76,328	41,695	10,028	9,964
1888...	31,100	18,384	6,942	4,696	1903...	65,970	43,239	10,120	10,816
1889...	35,895	20,215	7,619	5,418	1904...	68,649	43,800	10,564	11,832
1890...	37,459	23,087	7,801	5,141	1905...	93,822	50,087	12,288	13,866
1891...	33,750	22,907	6,847	6,004	1906...	104,676	55,344	12,711	17,855
1892...	36,662	25,257	6,481	4,869	1907...	87,182	57,706	....	.....
1893...	31,261	22,882	6,478	4,715	.....	.....	.....	.....	.....

A portion of the increase in the United States is due to the establishment of new clearing-houses; there are now 112 in the country.

It will be observed that since 1898 the exchanges at New York have been regularly larger than those in London. Since France does not use checks to anything like the degree that prevails in Great Britain and the United States, the volume of clearings is much smaller.

It is noteworthy that the course of business in general as indicated by these statistics, is quite similar in all three countries.

London's clearing-house was established in 1840, and was probably the first; New York followed in 1853. It is surprising that so simple a system should have been so late in being adopted by banking institutions, but it will be equally surprising to our posterity that the system was not developed more extensively in recent years.

In London some steps in the direction of development have been taken; checks of country banks are now "cleared" there by means of a separate settlement. In New York one of the stock exchanges has adopted the "clearing" system with satisfactory results.

But the great saving to commerce (which must of course bear the expense of exchanges) of a system of international clearings is so manifest, that it seems reasonable to suppose that a system, like the local ones, will be established in the near future.

In New York, Boston and Chicago the Treasury is represented in the clearing-house by the Assistant Treasurers there.

Credit Instruments.

The clearing-house institution has led to an examination into the extent to which credit instruments are used in the usual transactions of life.

The conclusion generally reached is that from 90 to 95 per cent. of the volume of transactions are settled by means of checks of various kinds. This conclusion has recently been seriously questioned; it is argued that too little weight is given the vast number of retail transactions and wage-payments, which are generally discharged in actual money.

A statement prepared by the Comptroller of the Currency, showing at various dates the actual deposits made in banks, distinguishing the kinds of money and orders therefor, is reproduced as perhaps the best concrete evidence in existence upon the question.

Date	Gold Coin	Silver Coin	Paper	Checks	Total Deposits
New York City.					
June 30, 1881.....	.27%	.01%	1.02%	98.70%	$167,437,759
Sept. 17, 1881.....	.54	.01	.65	98.80	165,193,347
July 1, 1890.....	.08	.02	3.86	96.04	165,923,382
Sept. 17, 1890.....	.05	.02	4.29	95.64	120,451,472
Sept. 15, 1892.....	.07	.04	7.53	92.36	130,976,963
Other Reserve Cities.					
June 30, 1881.....	.76	.15	4.71	94.38	77,100,715
Sept. 17, 1881.....	1.86	.18	5.61	92.35	77,922,247
July 1, 1890.....	.54	.19	5.59	93.68	163,855,766
Sept. 17, 1890.....	.65	.31	6.77	92.27	120,658,864
Sept. 15, 1892.....	.51	.31	6.44	92.74	116,514,324
Outside Banks.					
June 30, 1881.....	2.04	.77	15.47	81.72	40,175,542
Sept. 17, 1881.....	3.31	.68	14.27	81.74	52,118,185
July 1, 1890.....	2.93	1.08	11.90	84.09	92,045,578
Sept. 17, 1890.....	3.31	1.17	12.61	82.91	86,167,915
Sept. 15, 1892.....	2.66	1.14	11.29	84.91	83,713,926
All Banks					
June 30, 1881.....	.65	.16	4.06	95.13	284,714,016
Sept. 17, 1881.....	1.38	.17	4.36	94.09	295,233,779
July 1, 1890.....	.89	.32	6.29	92.50	421,824,726
Sept. 17, 1890.....	1.13	.43	7.40	91.04	327,278,251
Sept. 15, 1892.....	.88	.41	8.10	90.61	331,205,213

In 1894 and 1896 further examinations were made, in which it was endeavored to distinguish the retail trade. The results worked out as follows, the figures indicating use of checks:

	June 30, 1894 Retail	July 1, 1896		By States	1894 Retail	1896	
		Retail	All			Retail	All
New York City....	64.5%	79.4%	97.8%	North Atlantic	56.1%	69.2%	94.4%
Other reserve cities..	64 %	74.1%	92 %	South Atlantic	62.3%	61.5%	89.0%
Outside banks	57 %	63.1%	82.7%	North Central	54.3%	67.4%	88.4%
All banks	58.5%	67.4%	92.5%	South Central	65.6%	67.4%	84.8%
				Western	59.7%	66.8%	78.5%

These data, particularly those for 1896, which covered 5,530 banks, are of special interest, indicating as they do the difference in habits in the respective sections, the greater use of actual cash in the less populous districts, and the indication that the use of checks in retail business is actually increasing. Of the total deposited 6-10 of one per cent. in 1896, was gold, ½ per cent. silver and 6.3 per cent. paper; in retailers' deposits the proportions were 2.4% gold, 3.2% silver and 26.7% paper. California shows the largest use of gold with 27% in all, and 36.4% in retailers' deposits; Oregon, Washington, Idaho, Utah, Wyoming and Arizona follow in the order named. Silver showed largest use in Southern states, Georgia's retail business indicating 14.4%, the highest, Alabama, Florida, Mississippi and North Carolina next in order. The maximum ratio of checks for all deposits is shown in New York state, where 96.4% was reported; the lowest was California with 69.4%. Retail business showed the greatest use of checks in Nevada with 83.3%, the lowest in Rhode Island with 52%. The total deposits dealt with amounted to $302,936,232, of which $26,536,930 were those of retailers, or about 8.8% of the total. This ratio cannot, however, be accepted as an index of the volume of business done by means of cash; it is merely indicative of conditions.

Before leaving the clearing system a few words should be said in relation to

Clearing-house Loan Certificates.

These certificates have been issued during periods of great money stringency by clearing-house associations in various parts of the country. The course pursued is to receive from banks desiring to make use of such facilities, first-class securities or commercial paper upon special deposit under the supervision of a clearing-house committee; certificates are issued thereon to the extent of a fixed per cent. (say 75) of the value of the securities. The certificates are used by banks to meet their clearing-house balances, and are usually in large denominations, but in some cases, during 1893, they were issued in small denominations—some as low as 25 cents—to supply the absolute need of the public for circulation of some kind during the hoarding period. This was repeated in 1907.

This method of supplementing the reduced monetary supply enables banks to afford the mercantile community relief during periods when loans and discounts are naturally not freely made. Thus the device of economizing the meager supply of money proved invaluable on many occasions. The certificates were not kept in use for long periods, because they bore interest at the rate of 6 per cent., and sometimes more, so that it was profitable to retire them as soon as practicable.

The principal issues of these certificates were:

New York,	November 23, 1860, to March 9, 1861	$ 7,375,000
	September 19, 1861, to April 28, 1862	22,585,000
	November 6, 1863, to February 1, 1864	11,471,000
	March 7, 1864, to June 13, 1864	17,728,000
	September 20, 1873, to January 14, 1874	26,565,000
	May 15 to October 3, 1884	24,915,000
	November 11, 1890, to February 7, 1891	16,645,000
	June 21 to November 1, 1893	41,490,000
Philadelphia,	1873	6,785,000
	1890	8,870,000
	1893	10,965,000
Boston,	1890	5,065,000
	1893	11,445,000

The aggregate issues in 1907, beginning during the last week in October all redeemed by the following February, probably exceeded $200,000,000; New York alone had $100,000,000 maximum; and the issue was much more general than ever before. The only states reporting no issues were Maine, New Hampshire, Vermont, Rhode Island, New Jersey, Delaware, West Virginia, South Dakota and Montana.

It is to be borne in mind that there is no legal sanction for this creation of supplementary money; indeed a strict construction of the purpose of the national bank act would compel us to regard the issue of clearing-house certificates as unlawful. The existence of extraordinary needs causes the public to overlook this fact, however.

The facility with which such issues are made and their usefulness, suggested the advisibility of incorporating the device into law and thus have a permanent provision for the issue of "emergency currency." There are many bankers, however, who are strongly opposed to the device at all times, contending that it is calculated to influence banks to suspend cash payments too readily.

THE NEW YORK MONEY MARKET

Since New York is the financial center of the United States, the situation of the banking institutions there is naturally regarded as of great importance. Formerly the "bank statement" very fairly reflected this situation, but in recent years trust companies of the city have been doing a very substantial part of the same kind of business, and the statement of the "associated banks,"—those which are members of the clearing-house,—does not give the full facts. The statement embraces the items of capital, surplus, net deposits, circulation (of national banks), loans and investments, specie and legal tender notes on hand; but it gives the *averages* of the daily footings of the items, hence not the *actual* condition. There are ninety-six banks in the city, and only fifty-two of these are bers; of the remainder twenty-two publish statements, but the others and the trust companies do not. To show the importance of the non-public element, the following table has been compiled from returns in August, 1907, in millions of dollars:

	National Banks	State Banks	Trust Cos.	All	Associated Banks
Capital and surplus.....	245	58	206	509	290
Deposits, net.....	850	275	826	1952	1048
Loans and securities	932	268	912	2112	1088
Cash	219	57	48	324	272
Per cent. cash to deposits.....	25.7	20.8	5.8	16.6	25.9

It will be observed that the statement of the associated banks covers little more than one-half the operations, although these banks provide fully 84% of the reserve strength.

Steps are now being taken to alter this condition respecting publicity, and the trust companies will be required to hold larger reserves, to the end that the financial situation in the metropolis may be be strengthened.

In February, 1908, the publication of statements of the *actual* condition of the banks, and also of the status of the trust companies and non-associated banks, was begun.

THE MOVEMENT OF MONEY TO NEW YORK CITY.

Most of the banks in other parts of the country hold reserve balances in New York City banks; they ship their surplus moneys there in the first half of

the year and call for it in the latter half, when they need funds to move crops. This causes an ebb and flow of money amounting to many millions annually, and usually causes either a plethora or a dearth of means in the metropolis, which has its influence upon the stock-market operations and prices. Being repayable at a moment's notice, these funds can be loaned in New York only if repayable on demand, or "call loans," which are secured by collaterals in the shape of bonds and stocks. When there is a surplus of these funds, rates for loans are low; when the cash shrinks, due to the country demands, rates rise; and stocks go up with low money rates and down with high money rates. Frequently when money is cheap speculation becomes enormously extended, and when money becomes dear the reaction produces a panic.

The conditions are dependent upon the status of the cash reserves, which in the metropolis are held at 25% of the deposits (except in trust companies). It is when the surplus reserve above that ratio dwindles that rates go up, and occasionally there is an actual deficit in reserves. In the period since 1891 there have been deficits in six of the years; and in only four of them were the rates *for call loans* kept at or below 6% maximum; in the other years these rates went to 15%, 25%, 50%, and in five years to 100% or more, 186% being the maximum. (The rate is figured at 6%, the legal maximum, plus a commission.) On the other hand, to illustrate the alternating effect of the system, the rate for money in the early part of the year fell to 2% or less, regularly; it was at or under 1% in sixteen out of the seventeen years. (See p. 121.)

This indicates an excess of money in part of the year and an apparent deficiency in other times; emphasizing the great need of *elasticity* in the volume of the supply, capacity to contract or expand in accordance with the needs, and a better system of distribution of facilities.

The general trend of the movement of cash into and out of New York is indicated by the following averages for five years; the average monthly inflow was 13 millions, the movement terminating in August, although interrupted in March (seeding-time); the average monthly outflow for the remaining months was 6 millions. The metropolitan banks thus actually gained cash; and their statements bear out this conclusion.

THE NEW YORK STOCK EXCHANGE

"LISTING"—SPECULATION—STATISTICS.

A stock exchange is an institution where securities are bought and sold; the market for stocks and bonds. Membership is regarded very valuable, those in New York having been quoted as high as $97,000 in the most prosperous times. Primarily the transactions were almost exclusively sales and purchases by the brokers, who are members, for their customers; but the scope of operations has been very materially broadened. They are now classifiable generally into investments, speculative investments and speculations pure and simple. The last-named class may be properly characterized as mere wagers.

The securities dealt in upon the New York exchange are limited strictly to the "list," which is fixed by the managing board; there is, however, an "unlisted list," the securities included therein being regarded less commendable, because the requirements of the exchange have not been fully complied with. Practically all legitimate steam railway securities, most of the leading industrial class, some street railway, gas, electric and mining shares, are included in the two lists. The requirements for *full listing* are fairly comprehensive, embracing adequate statements of the condition of the corporations issuing the securities, and periodical reports of earnings, etc. Upon some days more business is done in shares on the "unlisted list" than in those of the other class.

Securities not admitted to dealings on the exchange are handled on the "curb" adjacent to the exchange, and many of the brokers in the main body also transact business there.

It is estimated that the par value of the securities dealt in is fully $20,000,000,000; there are of course new issues annually, but some of these merely replace others.

Brokers charge a commission upon transactions, fixed by the board at ⅛ of one per cent. Obviously if brokers do merely a straight investment commission business, there could be no failures unless fraud were practiced upon them; but they actually deal largely upon borrowed money, which involves risk; and some personally carry on the purely speculative business referred to, although this is regarded as unprofessional by high-class members.

By far the largest part of the business is speculative, although of this a very substantial portion is investment-speculative,—known as margin trading. Thus A, believing that a certain stock standing at 80, will rise, orders his broker to buy it; he deposits 20% of the price and the broker borrows the remaining 80% of the price from his bank, leaving the stock purchased with the bank as collateral security for the loan; the customer pays the interest.

Should the shares fall in price, the broker requires that the margin be made up pro rata, and the bank will probably also require further security; if this is not supplied by the purchaser, the stock is sold and he loses. If, on the other hand, the price of the stock advances, and the purchaser directs its sale, he wins the difference in price, less the interest charge and commissions.

If A believes that the stock will *fall* in price he may order his brokers to *sell* a given number of shares for future delivery, being of the opinion that he can purchase it at a lower price later, say in a fortnight or a month; and thus he would profit by the difference in price, less the charges. For if the shares are sold to-day at 80, and fall to 70, the seller obtains the stock at 70 and the purchaser must pay him 80.

The latter operation is termed "selling short"; in the former case the operator is said to be "long." Obviously the transactions are speculative; yet they are to be distinguished from those in which it is never intended to actually purchase or deliver shares, and where the parties merely settle with each other for the difference in prices; in these cases it is substantially a wager between B and C, that a certain security issue will rise or fall.

When there is manifested a tendency to *buy* shares, it is termed a "bull" movement, the general demand tending to raise prices; *per contra,* a selling tendency is known as a "bear" movement, a fall in prices resulting. While actual conditions, such as a change in earning power of the property represented by the securities, or a further issue indicating needs for more capital, are generally the motive forces causing the upward or downward trend; and while the interest rate, as indicative of the ability to borrow money freely for margin operations, also influences the movements; yet numerous fictitious, or at best irrelevant, matters are frequently used to raise or depress prices. Obviously cheap money encourages "bull movements," dear money causes "bear raids."

A properly regulated stock exchange is an indispensable factor in a highly organized financial system. There must be an open market where persons desiring to sell or buy bonds and stocks at a published price, can do so. Moreover, it is essential to development that such an institution also afford facilities for the marketing of new issues of corporations desiring to increase or improve their plants, etc. Yet it is also clear that, in the absence of adequate restrictions, unwholesome results are produced; prices are raised or depressed fictitiously; combinations are possible, by means of which large profits are made at the expense of the unsophisticated. The better class of members endeavor to restrain these operations, but their success has been far from complete.

By means of fictitious and purely gambling transactions, known as "wash sales," the prices of securities may be advanced, merely for the purpose of enabling those interested in them to obtain larger loans from the banks. For under the system already explained, more money can be borrowed upon a security when quoted at 120, than when quoted at only 80; and the fictitious advance in price can be brought about at comparatively small expense.

The banking powers might do much to place the stock exchange transactions upon a higher plane, by exercising greater discrimination in the granting of loans, without which, it is clear, there could be little expansion beyond the

reasonable, well-founded activity following prosperous times. However, banks are not in business for the general welfare, but for individual profit; and so long as the defective currency and banking system produces conditions of alternate plethora and deficiency of money, the desire for profit is naturally paramount.

In the accompanying table the statistics relating to the New York exchange are given in compact form: the volume of the transactions, the fluctuations in prices of shares and of call money rates, and the *net* annual additions to the list. The fluctuations exhibit remarkable movements, not altogether corresponding either with the volume of transactions or the price for money. Yet the general trend, both of share sales and of the prices, is indicative of the general conditions affecting the market. As usually occurs, speculation far outran the increase in general business; it was unquestionably stimulated by the inordinate expansion which has been discussed.

Stock Exchange Statistics.

Calendar Years	No. of Shares Sold, Millions	Bond Sales, Par Values, Millions	Prices of Shares Per cent: 60 R. R. Stocks *			Fluctuations		Actual Average Prices †	Call Money			Net Listings ‡ Millions	
			High	Low	Mean	Annual	Mean		Low Per cent.	High Per cent.	Prevailing Per cent.	Stocks	Bonds
1891	69.0	388	66.8	55.3	61.0	11.5	...	57.1	1	25	2 @3	98	207
1892	86.7	502	68.5	62.3	65.4	6.2	+ 4.4	63.5	1	40	1½@2	148	187
1893	78.0	301	66.3	41.7	54.0	24.6	—11.4	60.3	⅝	40	3 @6	142	181
1894	49.3	352	52.5	47.4	50.0	5.1	— 4.0	64.2	⅝	3	1	45	217
1895	66.4	519	56.1	44.5	50.3	11.6	+ 0.3	60.3	⅝	100	1 @1⅝	112	182
1896	56.7	394	50.8	40.7	45.7	10.1	— 4.6	65.2	1	127	2 @4	76	155
1897	77.5	544	60.0	45.6	52.8	14.4	+ 7.1	67.0	1	5½	1½@1¾	78	103
1898	112.2	922	67.0	52.6	59.8	14.4	+ 7.0	72.7	½	6	1½@2¼	122	271
1899	175.1	836	76.3	66.7	71.5	9.6	+11.7	78.6	1	186	2½@5	311	179
1900	138.3	578	84.9	68.5	76.7	16.4	+ 5.2	69.2	1	25	1½@2½	427	154
1901	265.6	999	104.0	84.4	94.2	19.6	+17.5	79.0	1	75	2 @3	506	241
1902	188.3	891	116.3	101.0	108.6	15.3	+14.4	79.9	2	35	2½@4½	262	200
1903	160.7	684	109.1	82.6	95.8	26.5	—12.8	73.2	1	15	2½@4	211	204
1904	186.5	1037	107.8	85.7	96.7	22.1	+ 0.9	69.9	½	6	⅞@1⅞	121	443
1905	263.0	1018	117.9	106.1	112.0	11.8	+15.3	87.3	1½	125	2 @3	225	589
1906	283.7	676	121.0	109.8	115.4	11.2	+ 3.4	94.2	1½	60	2 @6	254	315
1907	195.4	527	112.3	76.4	94.4	35.9	—21.0	85.8	1	125	2 @6	480	319

* Dun's compilation. † Financial Chronicle's compilation, railway shares, all sales.
‡ Financial Chronicle's compilation, new capital and old issues newly listed.

The number of shares sold in 1901, 1905 and 1906 is specially noteworthy. In each case there was an inordinate inflation of prices of shares; that of the first-named year was followed by a reaction in 1903; the unexampled advance of the two later years naturally brought about a similarly unprecedented decline in 1907, very much of which occurred prior to the panic period. It is to be borne in mind that the record of prices is not an accurate one; but it is a sufficiently close approximation to reflect conditions. It is often represented that the recent great fall destroyed billions of dollars of values: this argument is to be considered in connection with the obviously excessive rise in values preceding the fall. While average prices for 1907 may be below actual values, it is unquestionably true that those of 1905-6 were as much above the actual.

RESERVE MONEY AND BANKING

THE RESERVE SUPPLY—CURRENCY SYSTEM AND GOLD—INFLUENCE OF BANKING METHODS—INVESTMENTS OF BANKS.

The Provision and Use of Reserve Money.

In amplification of the subject of reserves a further analysis of our money supply and bank liabilities is requisite. Properly speaking, reserve moneys should include only gold and paper readily converted into gold; hence gold coin, gold certificates and legal tender notes only are properly available. So far as the tendency of the system causes these forms to be used extensively for current business, there is a dissipation of potentiality for reserves. Hence it is desirable to ascertain how much of the reserve money is being used for current purposes, which other forms would adequately provide for; and furthermore, the relation between our gold reserves and our demand liabilities by way of deposits and other moneys, is of importance.

The fact that silver certificates as well as silver dollars are under the national law available for reserve purposes, and state laws extend the permission to include national bank notes, does not justify their use in the highest economic sense of reserves. The silver forms are not by law exchangeable for gold; and bank notes may be redeemed in silver dollars.

The following tables furnish the data referred to for certain years; 1892 as that immediately preceding the panic of 1893; 1899 marking the close of the period of depression, and preceding the reform act of 1900; and the most recent years to show present conditions. From the figures in the table designated *a* it will be observed that banks use a substantial amount (one-fifth) of other money in reserves. At the present time nearly two-thirds of that proportion is silver. The data for state banking institutions are partly estimated, as no full detailed returns are available, such as are furnished by the national banks. But the results are within the facts rather than otherwise.

It is to be noted that there is a considerable margin of provision of large gold certificates over the amount in use; the contrary is the fact respecting government notes. In fact, there is reason to believe that the banks do not actually hold, in legal tender notes, the sums indicated by the returns; the conversion of so large a part of the supply into small denominations, has unquestionably caused their more extended use by the people; the increase in the small gold certificates will tend in the same direction. In other words there are in fact more bank notes held in reserves and called legal tender notes, than the data show.

a.—The Provision and Use of Reserve Money (Millions).

Years About June 30	The Provision			Some Details				Bank Holdings					Reserve Money Elsewhere
				Gold Certificates		Government Notes		Gold					
	Gold Coin *	Government Notes †	Both	Large	Small	Large	Small	Coin	Certificates	Government Notes	Total Reserve Money	Other Forms	
1892.....	664	449	1113	145	12	96	353	160	100	200	460	89	653
1899.....	963	441	1404	30	4	101	340	398	26	191	615	108	789
1906.....	1476	354	1830	362	198	39	315	265	267	257‡	789	222	1041
1907.....	1602	353	1955	427	251	38	315	275	350	257‡	882	225	1073

* Without any deductions for over-estimates.
† Includes Treasury Notes of 1890, which are full legal tender and redeemable in gold on demand.
‡ Probably wrong; the reports, however, warrant the conclusion shown.

Deducting from the reserve money not in banks the sum which the Treasury holds, will leave the amount in the hands of the people. On June 30, 1907, the Treasury held 305 millions of "free gold" (table C, p. 103), and four millions of government notes; this would leave 764 millions as the amount in the people's hands (table *b.*), of which 422 millions, nominal, was in gold; (actually the gold is to be reduced by the 135 millions admitted over-estimate, and probably by 30 millions more.) This would give 250 millions of gold certificates and 92 millions of legal tender notes in actual use according to the estimates; actually the first-named amount is too large and the latter too small.

b.—Reserves and Credit Liabilities (Millions).

Years About June 30	Reserve Money in		Credit Money in Circulation	Treasury Free Gold	Per cent. Gold to Credit Money	Commercial Deposits and Credit Money	Gold in Treasury and Banks	Per cent. Gold to Liabilities	Savings Deposits	Liabilities, Including Savings	Per cent. Gold Reserves to All
	People's Hands	Treasury									
1892.....	528	125	1052	114	18.3	3958	374	9.4	1713	5671	6.6
1899.....	519	270	1192	250	21.0	5778	674	11.5	2230	8008	8.4
1906.....	740	301	1551	290	18.8	10457	822	7.8	3482	13939	6.0
1907.....	764	309	1611	305	18.9	11193	930	8.3	3690	14883	6.3

The provision of ample reserve money is manifestly dependent upon conditions favorable to an increase in the gold supply; if production is insufficient, this can be accomplished only by importation. Again, the retention of the product and acquisition from abroad depend upon the status of the volume of paper currency; if this be redundant, gold is more likely to flow out. Upon the other hand, the need for greater supplies of gold should not be stimulated by artificial expansion of liabilities.

In 1892 the people had 47% of the reserve money; in 1907 only 34%; the Treasury holdings have increased, relatively. Yet the ratio of "free gold" held by the government, compared with other forms (legal-tender notes, silver in all forms, and bank notes, all based upon its credit), has diminished since 1899, standing in 1907 only slightly higher than in 1892 (18.3%.) Measuring this gold reserve and the gold in banks against credit money and deposit liabilities, the situation is even worse, 8.3% in 1907 compared with 9.4% in 1892; and if savings deposits be included the ratio of gold in reserves falls to 6.3%. The over-expansion of liabilities, very materially promoted by excessive bank note issues, has caused this relative weakening of gold support.

Europe has also experienced expansion, but the ratio of gold in reserves continues much larger, as statistics on other pages show; as against note-issues and silver, aggregating 5,250 millions, they held fully 2,300 millions of gold, or 43.8%; actually the ratio was considerably larger, since the banks had also 534 millions of the silver in vault. Measuring the gold reserves against the net credit money out and deposits (say 18,000 millions), the gold reserve ratio of Europe was fully 100% greater than ours.

Our Currency System and Gold Reserves.

This important difference in the basic security for the credit instruments is in very large part attributable to our defective currency and banking systems. We employ methods to provide credit paper currency which every other civilized nation has rejected as unsuitable. Thus we continue to use the government notes known as "greenbacks," and bond secured notes, nominally issued by banks, but actually also a liability of the government; whereas paper currency should be issued upon a radically different basis. Primarily paper should be supplemental to the deficit coin supply, to provide ample "tools of exchange"; the volume thereof should depend upon and be regulated by the volume of commercial transactions requiring currency for their consummation.

An excessive supply of money lowers the interest rate in general and stimulates speculation to an unwholesome degree; a deficient supply causes high rates and retards enterprise. It usually occurs that when interest rates rise materially, money (gold) is imported, until the supply is readjusted to the demand; so, too, under normal conditions the excess of supply is exported to re-establish the equilibrium. (The details of the movements are explained in the chapter on exchanges.)

While a system under which the supply of money is supplemented by paper currency will cause importations of gold when the demand for money exceeds the supply, it is to be noted that the importation involves expense which is necessarily taxed upon commerce, by way of higher charges for money—interest; and upon the other hand when the supply is excessive *gold* is driven out, since it is the sole international form of money; and when the stock of gold diminishes the ultimate basis of the entire credit structure is weakened.

It is obvious, therefore, that in order to maintain a fairly equable rate

for money, and also to conserve the gold stock, the supplemental supply of money should be regulated, as nearly as is possible, by the demand as the latter becomes manifest or abates. It is equally obvious that a paper currency issued by government, disbursable originally only for something for which the government has to pay, is not in any sense an issue regulated by business needs; indeed government credit notes are almost invariably fixed in amount, as our greenbacks are; it is necessary to pass new laws either to increase or to decrease the volume.

We have an even more unserviceable currency in our national bank notes, which, as a rule, are issued or retired as the banks are inclined to reap a profit from the purchase or sale of the bonds required to support the notes. It is a well-known fact that during each year from July to December the need for money is greater than in the other half of the year. The additional requirement is estimated at from 150 to 200 millions. Yet it is of record that the volume of our bank notes has steadily increased in each month since 1900 with very few exceptions (in 1902 and 1903); that it has failed to increase materially in the part of the years when demands were greatest and increased, sometimes very largely, when demands were at the lowest. This is illustrated by the following account of notes out on the first of each of the months named, the figures indicating millions; the amounts include only the notes actually secured by bonds and not those protected by "lawful money" deposits, explained *ante*.

Jan. 1900..	209.7	June 1902..	313.6	July 1904..	412.8	Jan. 1907..	549.5
July 1900..	274.1	July 1902..	314.2	Jan. 1905..	432.9	Mch. 1907..	548.2
Jan. 1901..	308.3	Jan. 1903..	342.1	July 1905..	463.5	July 1907..	556.2
July 1901..	323.9	April 1903..	338.3	Jan. 1906..	506.2	Aug. 1907..	556.0
Oct. 1901..	328.8	July 1903..	372.3	July 1906..	518.5	Sept. 1907..	557.7
Jan. 1902..	325.0	Jan. 1904..	387.3	Aug. 1906..	517.5	Oct. 1907..	557.0

In the intervening months the amounts increased or decreased as the figures indicate.

Two other facts should be adverted to in this connection:

1. The banks have under the law the power to issue notes to the full amount of their capital; they have at no time prior to December, 1907, exercised that right, as a whole, to within 300 millions of the limit, since 1900. Many of the smaller banks and a few of the larger ones issue the full allowance. The system obviously does not respond to the demands.

2. We are, with an overflowing Treasury, reversing our historic national policy of paying off our debt, merely to enable this unsatisfactory system to be continued; and we are loaning out the Treasury surplus to the banks, *without interest*, because we will not pay our debt; thus we are losing interest doubly on our surplus.

The result of the operation of this note system has been a recurring plethora and deficiency, "feast and famine"; the additions of each year were so diverted as to be unavailable for the needs the next. Reference to another page will

show how differently the system in Canada operates to adjust volume to needs. Under a normal system notes are retired as the needs abate; with us they are kept in use despite the absence of normal needs, because there is a profit in applying them to artificially created speculative uses; and since banks are required to invest part of their capital to obtain and issue notes, they feel justified in having that capital continuously employed earning something; hence the notes are literally forced out.

It is this system, the working of which will presently be shown in greater detail, that has caused interest rates to be abnormally high at points distant from money centers, and abnormally fluctuating at the chief center,—sometimes absurdly low and at other times barbarously high; from these conditions, which are necessarily disturbing to business and breed panics, the efforts of the reform plans seek to relieve us. Incidentally it may be remarked that the flow of money, which is normally in the direction of higher rates,—going from the point where it earns less to one where it can earn more,—is in very large measure reversed under our system.

The solution of the problem thus presented, is clearly to have a substantial part of our paper currency so regulated by law, that it will increase in volume by bringing into use fresh supplies when needs arise, and based solely upon the business conditions which give rise to the need; and to diminish when the needs are satisfied as evidenced by the consummation of the business. A demand for a loan to move a crop is a manifestation of such a need; the volume of commercial paper offered for discount, signifies the extent of trade demands; most of these loans are of short duration and their payment brings back to the bank the equivalent of the advance made. As the bank should be authorized to issue its notes when such conditions call for them, it should be induced or required to retire them when the need passes. In short, in other civilized countries bank notes issue only when they are required to supplement other means to accommodate borrowers, and exist no longer than the requirement lasts. We should in some way provide a similar mechanism.

Influence of the Banking System.

Attention has been directed to the fact that since 1898 the amounts of the deposits of our banks have largely exceeded the loans; a condition indicating upon its face a surplus of loanable capital. It is to be regretted that our bank statistics are not sufficiently complete to enable a detailed analysis of the operations of all institutions; it may be said, however, that sufficient appears to indicate that the course of business in general is fairly shown by the operations of the national banks; and for these we have quite exhaustive data.

The bank act classifies the national banks into: (1) "country banks," (2) "reserve city banks," and (3) "central reserve city banks"; this is particularly with respect to reserve requirements; the first named group, constituting the great majority (6,100 out of 6,600), are required to have 15% reserve upon their deposits, but need have only $^3/_5$ thereof in cash; the remainder may be held as balance on deposit in a national bank in one of the two classes of

reserve cities. Banks of the second class, located in the commercial centers generally, are required to hold 25% reserves, ½ thereof in cash, the remainder with a national bank in a central reserve city; banks of the last-named class (including only those of New York, Chicago and St. Louis) must have 25% reserves, *all in cash.*

Thus $10,000 in cash deposited in a country bank would stand as cash reserve for $166,666 of deposits (or of loans, since loans become deposits, as already explained). But the country bank may hold $600 of the cash and send $9,400 to a reserve city bank, where it becomes available for $75,200 deposits, inclusive of the original sum,—in other words, for $65,800 additional deposits or loans; but the reserve city bank may content itself with holding ⅛ of the cash as reserve against the country bank's deposit and send $8,225 to a central reserve bank, where that sum stands as reserve for $32,900 of deposits (or loans), including the original; in other words, expands the loaning power of the central reserve bank by $24,675.

If this process is pursued, the $10,000 would in the aggregate stand for $42,300 of deposits; if held in the country bank it would stand for nearly four times as much.

It is clear that moving the cash to the center reduces the aggregate loaning capacity of the banks.

This discrimination in the gross reserve requirements in favor of the interior banks is, upon the whole, proper; the objectionable feature is the permission to loan out reserves to other banks so extensively. A bank is primarily a quasi-public corporation; it receives from the community in which it is located, the surplus cash and means of a part of the people, and is supposed to accommodate with loans those in the community engaged in business. To the extent that it fails to do so, or does so at too great a cost, it falls short of performing the chief of the functions for which it is created. In the following tables, compiled from reports of banks nearest September 1 of each year, some of the results are shown. The years are the same as in the preceding tables, but there are added the averages for the preceding seven years for comparison. Table *c* relates to country banks.

c.—Operations of Country National Banks.

(From reports nearest September 1.) (Millions.)

Periods	Individual Deposits	Due to Banks	Net Deposits	Loans *	% Loans to Net Deposits	U.S. Deposits	Notes	Due from Banks	Bonds, Stocks, etc.	Reserve Required	Cash Held	% Cash	Excess with Banks
1886–92†.....	779	60	796	980	123	16	125	177	70	119	90	75.6	149
1892	964	76	975	1151	118	8	117	228	89	146	105	71.9	187
1893–99†.....	941	69	958	1027	107	12	141	230	128	144	114	79.2	200
1899	1235	98	1271	1114	88	26	149	261	180	191	124	64.9	194
1900–06†.....	1796	141	1239	1664	91	43	249	433	283	276	147	49.4	304
1906	2347	181	2385	2147	90	56	332	535	362	358	177	53.2	354
1907	2567	206	2627	2401	91	71	351	549	389	394	200	50.8	355

* Including overdrafts. † Annual averages.

Reserves are calculated upon *net* deposits, which include the individual deposits plus amounts due banks less checks on hand; in the case of reserve city banks deduction of sums due from banks not reserve agents are also allowed. It is therefore proper to compare the loans with the *net* deposits. The item of "bonds, stocks, etc.," includes only the investments other than the bonds deposited with the United States to secure notes and government moneys. The last column shows the excess of funds loaned to other banks over the sum properly classifiable as reserves held in banks,—ascertained by deducting cash reserves from the total required. Actually, banks are also permitted to count as reserve the amount of their 5% note-redemption fund in the Treasury (explained *ante*); but the amount thereof, being relatively small, may be ignored in this connection. It would obviously increase the excess loaned to banks.

The significance of these figures is shown in the columns giving percentages; the ratio of loans to net deposits in the earlier years shows that the deposits were insufficient to meet the loan demands; the note-issues and the borrowing of public money from the Treasury to supplement deposit means, were hence warranted. In later years (from 1899), the situation was reversed; the deposits provided more than was needed for loans, and there was no apparent need for the great increase in note-issues and public money borrowings. The banks thus proceeded to employ the means so largely expanded in loaning to other banks, which pay 2 to 3% on such "country bank deposits," or by investing in securities, yielding a somewhat higher rate.

The question naturally arises, were the local demands for loans fully satisfied? The normal result of the over-supply of means should have been a reduction in the interest rates in the several localities; but there was no material decline in the charges. Despite the great increase in means the pressure for funds to move crops in the fall was regularly severe; the banks had their surpluses elsewhere and found it difficult to obtain them freely; obviously an anomalous condition, largely due to the excessive note-issues fostered by our system. Had the banks withdrawn notes when demands slackened annually after December, they would have had them at home when the needs arose after July.

There is an impression that the law places obstacles in the way of withdrawals of notes; this is erroneous; the law, as already stated, limits the *retirement* of notes by surrender of bonds, but there is nothing to prevent the holding of notes in the vaults of banks and thus avoiding the undue expansion; a few banks do this, but only a few. There is a fraction of one per cent. profit, ordinarily, in keeping them in circulation; occasionally the profit is larger. The surplus notes are forwarded to the reserve cities, being in large measure the vehicle for the transmission of the excessive deposits there. Since reserve city banks cannot use the notes for reserves, they are at once forwarded to the Treasury for redemption in reserve-money; the Treasury then calls upon the issuing banks to replenish the redemption fund; when this is done the "redeemed" notes are returned to the banks of issue and are by them again put

into circulation. This process,—"an endless chain of non-redemption,"—causes a relative depletion of the cash reserves of the country banks, as shown in the table. Fully one-half the notes received for redemption at Washington, come from New York city.

Here then is a potent cause of the inordinate expansion and reduction in reserves, artificially created by the peculiar note-issue provision.

In the next table (*d*) the results are shown in the operations of reserve city banks (exclusive of New York City). Here we find similar conditions. Required to maintain somewhat larger reserves, the loaning power is necessarily more limited; but the same excess of means, due in part to the great increase in sums due to banks (the excessive "country deposits" of *both national and state* institutions), the growth of note-issues and public deposits, notwithstanding the surplus available; and the seemingly compulsory use of means in loans to other banks and in investments; finally the resulting decrease in relative cash reserves.

d.—Operations of Reserve City National Banks, Exclusive of New York.

(Millions.)

Periods	Individual Deposits	Due to Banks	Net Deposits	Loans *	% Loans to Net Deposits	U.S. Deposits	Notes	Due from Banks	Bonds, Stocks, etc.	Reserve Required	Cash Held	% Cash	Excess with Banks
1886–92†....	415	175	508	541	106	9	22	110	24	127	95	74.8	78
1892	524	244	654	675	103	4	21	146	39	164	119	72.5	101
1893–99†....	557	271	708	667	94	10	35	179	57	177	133	75.1	135
1899	765	464	1053	860	81	26	36	293	99	263	165	63.1	195
1900–06†....	966	722	1415	1188	84	38	97	407	152	354	212	59.9	265
1906	1194	898	1715	1482	86	41	141	484	185	429	249	58.0	304
1907	1219	923	1803	1595	88	55	151	468	183	451	283	62.7	300

* Including overdrafts. † Annual averages.

Turning now to table *e* giving the status of the national banks in the chief money center, New York, a different situation is presented. The marked increase in accumulation of means is in large part the result of the interior banks' deposits; as these sums are loaned out they become individual deposits; the loaning power is limited by the requirement of 25% actual cash reserves. The necessity for repayment of the country deposits on demand requires that they be loaned out largely on call (the process is more fully explained elsewhere); this means in the speculative field, and the prevalence of speculative loans is indicated by the amount of the collateral class stated, and the proportions as indicated in the last column.

Thus the surplus means of interior banks have become the main resource of the speculative element in our business; increasing enormously approximately with the excess of notes; since the movement of this excess is *to* New York during the earlier half of the year, the congestion is greatest in those months, and the phenomenally low interest rates for call loans (2% and under), occur

then, inciting inordinate speculation. When the movement of money is, later in each year, *away* from New York, the situation is reversed, call money rates rise abnormally and panic is averted only with great effort. It would appear, therefore, that our note-issue system is literally a panic breeder.

e.—Operations of New York City National Banks.

(Millions.)

Periods	Individual Deposits	Due to Banks	Net Deposits	Loans		% Loans to Net Deposits	U.S. Deposits	Notes	Due from Banks	Bonds, Stocks, etc.	Reserve Required	Cash Held	% Collateral Loans
				All *	Collateral								
1886–92†.....	259	168	329	293	145	89	4	6	29	22	82	88	49.4
1892	277	211	392	344	184	88	1	6	35	31	98	103	53.5
1893–99†.....	332	239	489	387	219	79	10	16	33	45	122	140	56.5
1899	451	367	708	542	373	76	27	15	32	60	177	178	68.8
1900–06†.....	563	491	847	676	429	85	27	40	51	111	212	222	63.4
1906	659	509	827	702	442	85	10	46	53	136	207	199‡	63.1
1907	586	465	826	713	404	86	34	51	55	136	206	219	56.7

* Including overdrafts. † Annual averages. ‡Deficit.

It is not contended that the stock-exchange operations should not receive attention from the banks; it is indeed absolutely essential that reasonable extensions should at all times be made to maintain fair prices for securities and provide means for the flotation of them for additional requirements. But the inordinate and purely artificial accumulation of funds in the chief center not only causes vicious results, but in the end defeats the benefits derivable from the normal operations of the market for securities.

It must be borne in mind that when interior banks' means are thus loaned at 2%, the rate at home shows no material decline; in other words, money flows from 6@12% markets to one where rates are much lower; and the further anomaly is to be observed, that the sections of the country supposedly having a deficient supply of credit facilities are actually loaning means in the section having the greatest supply. Indeed interior banks loan funds directly to speculative operators in New York, in competition with their own reserve agents there. *Per contra* interior enterprises requiring capital, resort to New York, where they can obtain funds at lower rates than at home (the home market being frequently closed to them altogether); and it doubtlessly occurs that an Iowa trolley company, for example, obtains loans in the center from the very sums sent there by Iowa banks.

As before stated, the course of business of banking institutions operating under state laws is practically the same; the elements of note-issues and government deposits are of course absent; but in general the reserve requirements are more lax, permitting a larger loan margin. The general conclusion that there are radical changes to be brought about in our banking system as well as in our currency system, seems unavoidable. The professed aim of the currency reform movement is to reduce and equalize interest rates; to adapt the supply of money means to the varying demands of *sections* and *seasons*. It would

seem that a credit-note system, or one providing in part for such notes, is indispensable to such a result; Canada has solved the problem admirably respecting these features. But it is quite evident that unless the proposed credit-note system be surrounded by other safeguards, undue expansion will go on and panic-breeding as well; and the equalization of interest rates will remain unaccomplished.

To ascertain whether the results already shown apply equally to the banks of the sections showing relatively deficient credit facilities, the following abstract of the chief items from the return for August, 1907, is presented. Here again the total operation shows a similar course of business; and only the Southern banks appear to have required means to supplement deposits in order to meet demands for loans. In fact they show a notable proceeding to increase means by *rediscounts*.

	Southern	Central	Western	Total	All Banks
Net Deposits	506	1533	395	2434	2626
Loans	569	1357	311	2237	4677
Excess deposits	—	176	84	197	2049
Excess loans	63	—	—	—	—
Notes	88	149	37	274	551
U. S. deposits	24	36	10	70	143
Due from banks	134	351	119	604	1072
Due to banks	84	523	78	685	1595
Investments	29	140	34	203	708
Reserve in cash	47	195	39	281	702
Reserve in banks	39	112	31	182	349
Excess in banks	95	239	88	422	723
Rediscounts and bills payable	33	3	3	39	59

Investments of Banks.

The general principle in commercial banking is that the means should be so employed as to enable speedy liquidations; part in cash and part in short-term loans or commercial paper. It is therefore a question whether securities with long terms to run are properly to be included except to a very limited degree. The following table furnishes a comparative view.

The ratio of total resources invested in securities by national banks, exclusive of those necessary to secure notes and deposits, has nearly doubled since 1892; comparing state bank returns, a more marked increase is observed. This has doubtless been in part caused by the intrusion in the banking field of the trust companies, already noted; but it has also been accelerated in the case of national banks by the excessive note-issues and consequent increase in means above needs. Doubtless it has also been stimulated by the enormous increase in security issues and by the consequent change in borrowing methods of corporations.

It is sometimes represented in defense of the policy that securities con-

f.—Ratio of Investments to all Resources.

(Millions.)

	1892							1907						
	All Resources	Bonds, Stocks, Etc.						All Resources	Bonds, Stocks, Etc.					
		With Treas.	Per cent.	Other	Per cent.	All	Per cent.		With Treas.	Per cent.	Other	Per cent.	All	Per cent.
Country Banks...	1821	142	7.8	89	4.9	231	12.7	4138	426	10.3	389	9.4	815	19.7
Reserve Banks...	1087	29	2.7	39	3.6	68	6.3	2887	212	7.3	183	6.4	395	13.7
N. Y. City Banks.	602	8	1.3	31	5.1	39	6.5	1365	83	6.1	136	9.9	219	16.0
All Nationals....	3510	179	5.1	159	4.5	338	9.6	8390	721	8.6	708	8.4	1429	17.0
State Banks.....	1041	..	..	50	4.8	50	4.8	4119	..	..	487	11.8	487	11.8

stitute a secondary reserve; while this might apply to high-grade bonds, in a measure, it is quite probable that the sums reported are not made up entirely of these prime securities; moreover upon the occasions when reserves are most needed, the pressure of high interest rates causes low security prices, and loss in sales thereof is likely to result. Note that the country banks have a larger proportion of securities on hand than they have of cash against deposits. It may be said in general that the tendency is not salutary to the best results in banking, since it ties up too large a part of the means in comparatively permanent form.

When, during the panic of 1907, the need for cash became pressing, the securities proved generally useless to help out the banks; even to provide them with means to procure government deposits, the banks were compelled to borrow very largely from others who had the bonds of the requisite character: state, municipal or highest-grade railway issues.

MONETARY SYSTEMS OF OTHER COUNTRIES

THE STANDARDS AND THE UNITS OF COINAGE—NOTE-ISSUES—BANKING.

An examination of the systems of other countries discloses the fact that almost all employ beside gold and silver, notes of banks rather than other paper forms; and that a majority of the civilized nations confine the issue of paper to one central bank. It appears also that in almost every instance branches of banks are authorized, and thus very materially distribute facilities at the least cost.

THE BRITISH SYSTEM.

£=4.86^{2}/_{3}$; divided into 20 shillings, each of 12 pence of 4 farthings.

Prior to the year 1280 the £ was actually a pound Troy of silver of "sterling" fineness: *i. e.* $^{37}/_{40}$ or .925; its weight was repeatedly reduced until 1816, since which date that quantity of silver is coinable into £3 6s. A pound Troy of standard gold was in the XIV century equal to £13 3s 4d, of slightly higher than the present fineness of $^{11}/_{12}$ or .916$^{2}/_{3}$, which was adopted in 1603; under the law of 1816 a pound of standard gold is coinable into £46 14s 6d. The same law established the gold standard, making silver subsidiary. Thus the ounce of gold is worth £3 17s 10½d; the coinage ratio is 14.29 to 1.

The unit (*sovereign*) weighs 123.274 grains, of which 113.001 grains is pure gold; there is also a half-sovereign. The *shilling* weighs 87.27 grains, containing 80.72 grains of pure metal. There are also crowns (5s), double-florins (4s), half-crowns, florins, six- and three-pence pieces. The former *guinea* (gold) was equal to 21s.

Anyone may bring gold to the mint and have it coined free at the rate stated; but in order to avoid the delay of coining the Bank of England is required by law of 1844 to pay at once for any gold at the rate of £3 17s 9d per oz. standard, the charge of 1½d per oz. being imposed for the accommodation. Silver is of course coined only on government account.

British gold coin is legal tender in all the colonies and dependencies; Australia and India also coin sovereigns and these circulate at parity throughout the empire. A few of the colonies are under the silver standard (as will appear); for the others the British mint coins special silver pieces, in most cases of the same denominations and values as those used at home.

BANK NOTES AND BANKING.

Excepting a small sum still emitted by other English banks, the paper issues for England and Wales are exclusively Bank of England notes; they are legal tender there except in payments by the Bank, but are in fact accepted almost everywhere. This great institution was founded in 1694; its latest charter dates from 1844; it is a private corporation with certain public functions, the chief being the regulation of the money supply and the interest rate.

To the amount of £18,450,000 its notes are issued upon securities; the sum was originally the amount of its capital, but as the other banks surrender the right to issue, it accrues to the Bank under this category; further issues are permitted only upon actual metal in bank; the right to base one-fifth upon silver has never been exercised. Thus for many years the issues have been practically gold certificates, and do not increase the volume of money. No notes under £5 are permitted and the currency function is kept strictly separate. A comparative official statement of the Bank follows:

Issue Department.

	1896	1906		1896	1906
Notes issued	£62,323,000	£56,173,000	Gov't securities	£11,015,100	£11,015,100
			Other securities	5,784,900	7,434,900
			Gold coin and bullion	45,523,000	37,723,000

Banking Department.

	1896	1906		1896	1906
Capital	£14,553,000	£14,553,000	Gov't securities	£14,963,300	£14,338,000
Surplus	3,310,500	3,683,000	Other securities	29,134,100	30,791,000
Public deposits	7,580,900	8,658,000	Notes	34,708,300	27,345,000
Other deposits	55,577,800	46,924,000	Coin	2,369,400	1,412,000
Other items	152,900	68,000			
Totals	£81,175,100	£73,886,000	Totals	£81,175,100	£73,886,000

The Bank causes an increase in the volume of money for the country either by increasing the fixed price for gold or raising the discount rate, or both. London is the chief market of the world for gold, and for capital as well, owing to the great accumulation of wealth there. The banking power of England is reflected by these figures for 1907:

	Bank of England	Other banks	All
Capital, surplus and profits	$ 89,300,000	$ 447,900,000	$ 537,200,000
Deposits	289,600,000	3,414,100,000	3,703,700,000
Notes in circulation	146,000,000	2,400,000	148,400,000
Cash reserve	177,700,000	.....	177,700,000
Reserves in cash and "at call" (This does not include Scotch and Irish banks).		885,700,000	885,700,000

This shows a "power" of nearly 4,390 millions. The other banks keep large reserves in the Bank, which endeavors to maintain about 40% in cash

upon its banking liabilities; the other banks hold not more than 5% in cash against their deposits. The Bank's weekly report is an important event, every Thursday; and its discount rate is a factor throughout the financial world. It rises or falls substantially in accordance with the status of its banking reserve. During the past decade the rate reached 6% twice; for a long period it was under 4%; the actual average for the period having been 3½%. During the recent disturbances the rate rose to 7%, for the first time in a generation.

Note-issues and coin holdings of the Bank annually since 1896 appear in the chapter on the volume of money.

The Bank has only 11 branches, but the 75 others have about 5,000.

Under British charters 32 banks operating in the colonies, with 2,500 branches, have offices in London; their resources total 1,800 millions; and 30 banks with 1,200 branches operating in foreign countries, with resources of 3,175 millions also report. Adding the Scotch and Irish banks, the British influence is thus felt in the use of $10,600,000,000 of banking means, not including savings banks, which would add 1,000 millions for the United Kingdom alone; nor does this total include the independent (local) colonial banks.

The aggregate of all would probably reach 14,000 millions.

SCOTLAND

has an independent system, composed of 11 banks with 1,180 branches, an average of one office to about 4,000 population. The chief institution is the Royal Bank, dating from 1695. All the banks issue notes upon their credit, using them in a scientific manner to supplement the coin supply as the needs occur. By a law of 1845 they are permitted to issue about $13,000,000 of credit notes and as much more as there is coin on hand, in sums as low as £1; in practice this has been giving Scotland a remarkably elastic currency. The notes are by law redeemable in coin only at the head offices. A highly developed credit-giving system aids materially in providing the people with facilities; this is rendered practicable by reason of the settled and almost stationary population.

The banks report capital and surplus $92,000,000, deposits $526,000,000, note-issues $38,000,000, loans $356,000,000, coin $31,000,000; total resources $688,000,000.

IRELAND

also has an independent system, somewhat similar to that of Scotland; 9 banks with 700 branches (one to about 6,200 population), issue notes to the amount of about $31,000,000, partly on credit, in denominations as low as £1, furnishing an adequate volume of elastic currency. Here the notes are redeemable at the branches as well as at the head offices. The total means of the Irish banks amount to about $375,000,000; capital and surplus $59,000,000, deposits $280,000,000, loans $216,000,000, and coin $17,000,000, against $32,000,000 notes.

CANADA.

Dollar=100 cents; £=$4.86^2/_3$. Accounts are kept in dollars.

For a country of large area, in process of development, the Dominion of Canada has an ideal money and banking system. The gold standard prevails; a very considerable amount of gold is produced annually, but in the absence of a mint (now soon to be established), there has been no distinctive gold coinage; United States coin and British sovereigns are equally legal tender, the first-named being the chief metallic medium. Silver of 50, 25, 10 and 5 cents, and a bronze 1-cent piece, are provided by the British mint. The largest silver piece contains 179.32 grains at .925 fine, hence 165.87 grains pure, somewhat less than the United States half-dollar.

The paper currency consists of legal-tender Dominion notes, and of bank notes issued on credit by 35 institutions with 1880 branches in the Dominion, and a few in the United States and Cuba. The Bank act was last revised in 1891; note-issues may not exceed the capital of the bank; none of denominations less than $5 are permitted; the notes are a first lien upon the assets and are redeemable, in case of insolvency, through a 5% guaranty fund established by all the banks and held by the government; notes of insolvent banks bear 6% interest until provision is made for redemption; when the guaranty fund is impaired the banks make up the deficit *pro rata*.

The supervision of the system is in a government board which determines the places where notes are to be redeemed, which may be effected either in coin or Dominion notes. No fixed reserves are required, but 40% of the reserves held must be in Dominion notes. Actually the cash held is less than 10% of the liability for deposits and notes; but the deposits are for the greater part payable only after notice, similar to savings deposits, and the banks can usually command coin speedily from New York. Three of the banks have also British charters.

Dominion notes are issuable without limit provided any excess over $18,000,000 is covered by gold; the total issue amounts to about $56,500,000, the gold held to $38,700,000; the balance being covered by government bonds. The volume is increased from time to time to serve as redemption money for the banks. They have been issued in denomination as low as 25 cents.

Although several banks have failed since 1880, one quite recently, not a dollar has been lost to note-holders, nor have the notes ever depreciated. The volume of currency is very elastic; as a result interest rates fluctuate at most 1 to 2 points, a maximum of over 6% being extraordinary; and rates at interior points are rarely more than 1% higher than in the chief centers. On the other hand rates never fall to the abnormally low point of 2%, since there is never a glut of currency, contraction and expansion being regulated by business needs.

The following tables show the growth of banking and the chief items; also the elasticity of the note-issues.

Statistics of Canadian Banks.
(In Millions of Dollars.)

Years	Capital	Surplus	Notes	Deposits Demand	Deposits Time	Loans	Reserve Cash	Total Assets
1886	61	18	31	50	51	171	15	228
1891	61	24	36	59	85	204	16	281
1896	62	26	32	65	123	225	24	323
1901	67	37	56	121	241	402	31	553
1906	93	65	70	222	385	667	61	890
1907	96	69	71	230	415	712	69	951

Note-Issues of Canadian Banks.

Years	Maximum	Minimum	Years	Maximum	Minimum
1897	42	30	1902	66	49
1898	42	35	1903	70	55
1899	50	37	1904	72	57
1900	53	41	1905	77	58
1901	58	45	1906	86	62

NEWFOUNDLAND.

not a member of the Dominion, has its own coins, the principal one being a $2 gold piece, weighing 51.364 grains, .916⅔ fine, worth $2.028 U. S. Hence the dollar is somewhat better than our own. U. S. gold and Canadian paper currency circulate freely. Subsidiary silver is supplied by the British mint, similar to that supplied to Canada.

BRITISH WEST INDIES.

Jamaica, Bermuda, Bahamas, Trinidad, Barbados, St. Kitts, Tobago, Turk's, Grenada, Antigua, Dominica, St. Lucia, St. Vincent.

While British gold coin is legal tender in these islands, U. S. coin is also used quite extensively. The mother country provides silver and minor coin, some in denominations of shillings and pence, some in cents. Paper currency is furnished by three banks with limited note-issuing powers. The chief one is the Colonial Bank, head office in Jamaica and numerous branches; its assets are about $18,000,000 and note-issues $2,000,000. Specie on hand is usually fully 70% of the note issue.

BRITISH GUIANA has substantially the same system as the islands.

BRITISH HONDURAS has a dollar unit identical with that of the U. S.

FALKLAND ISLANDS and ST. HELENA use little money, and that strictly British.

BRITISH INDIA.

£=15 rupees, of 16 annas, of 4 pice, of 3 pie. Rupee=32.44 cents U. S.

The silver standard prevailed in India during many generations; only recently has it been found practicable to introduce the gold standard with silver currency at an arbitrary valuation. (The details are discussed in later pages.) The £ is the unit; the ancient silver rupee, of 180 grains, .916⅔ fine,

hence 165 grains pure, remains the chief coin at the fixed rating of 16 pence. The enormous population uses silver and base-metal coins almost exclusively; the poverty of the people requiring small subdivisions; the pie (192 to the rupee) is equal to about 1.6 mills U. S.

There is a large supply of silver, over $600,000,000; and gold has been flowing to India for a century or more, the greater part remaining; but of this, estimated at $950,000,000, only a fraction is actually used as money, being largely in hoards or ornament form.

Paper currency is issued only by the government; about $140,000,000 being out, covered by a reserve of gold and silver to about 70%, the remainder by securities. Part of the coin reserve is held in London. Silver is kept at parity by the provision for exchange into gold or notes.

Banking is not very extensive, although several large institutions, some with British charters, do business there and have branches in near-by countries. They report resources of about $400,000,000.

In stating large sums in rupees the expression Rx (tens of rupees) is used; and 100,000 rupees is a *lac;* 10,000,000 rupees a *crore;* but the latter is written Rs 1,00,00,000.

CEYLON

also uses rupees under the same conditions; but here the division is into hundredths, known as cents. Government notes are issued substantially as in India.

Straits Settlements.

Dollar of 100 cents; fluctuating value.

This important colonial possession is not yet firmly established upon the gold-standard-silver-currency basis. Its coin is the British silver dollar, designed to supersede the Mexican peso, which for several centuries was the chief coin in the Orient beyond India. This piece was coined at 416 grains, .900 fine, hence somewhat better than the U. S. dollar; but with the fall in the price of silver it also declined. The reform plan fixed a parity at 28 pence (56.7 cents U. S.), but when silver rose above that level it was deemed wise to reduce its weight; it is now 312 grains, .900 fineness. There is also a half-dollar and 20, 10 and 5 cent silver pieces. To maintain parity government notes are issued for silver and a gold exchange fund is established. The notes out amount to about $22,000,000 (silver), of which $13,000,000 covered by specie, the rest by securities. (As the dollar is worth only about half in gold these amounts are to be reduced accordingly.)

Bank notes which formerly circulated actively are now out of use. Banking is carried on by means of branches of the Hong Kong and India banks.

Hong Kong.

British dollar of 100 cents; fluctuating value.

This is probably the most important place in the Orient, at the gateway

of Chinese trade. It is the exchange point between gold-standard and silver-standard countries, and to facilitate the adjustment retains the latter basis just as China does. The unit is the British dollar of a special type; it contains 416 grains, .900 fine, hence 374.4 grains pure, and is subdivided into 50, 20, 10 and 5 cents. Valuation about fifty-two cents United States. Some Mexican pesos are still used and of course Chinese taels as well. The provision of money covers a large part of China along the coast. One bank issues notes against abundant reserves. It shows capital $10,000,000, surplus $24,000,000, deposits $190,000,000; total resources $260,000,000, *all in silver,* hence about $135,000,000 gold value. Note-issues are reported at $16,000,000 and the coin in hand at $49,000,000. It has branches at most of the important points in the vicinity.

Australia and New Zealand.

£=$4.86 2-3; British system throughout.

Since 1851 large amounts of gold have been produced in these colonies, the greater part being exported. Local mints coin gold identical with that issued at London; silver is furnished by the mint of the mother country. There are twenty-two banks with numerous branches, many with British charters; they issue notes, about $31,000,000 in amount, covered by gold, of which they hold fully $140,000,000. Total resources are $860,000,000. Capital is $96,000,000 and deposits $650,000,000. This is a very strong showing for about five million population.

New Guinea, Fiji and other island possessions have the British system; but in Borneo a dollar and cent system prevails, with bronze money as the chief medium.

British Africa.

£=$4.86 2-3; British system throughout.

The South African Republics are also large producers of gold. There are, however, no mints except in the Transvaal, the gold coin coming from those in London and Australia, subsidiary silver from the former. Considerable amounts of gold are retained.

Cape Colony permits banks to issue legal tender notes secured by bonds deposited with the government, which certifies the notes. In fact, however, there are only about $10,000,000 of paper in use and $34,000,000 gold in banks.

Natal has credit bank notes, about $1,500,000 in amount, gold in banks being fully five times the sum. *Transvaal, Orange Free State, Rhodesia* are supplied with paper issued by a bank in the first named about the same as that in Natal.

Banking resources show fully $300,000,000, the institutions operating under British charters and through branches.

MINOR POSSESSIONS.

Sierra Leone, Gambia, Gold Coast, and the several protectorates on the west coast, also use British money; *Mauritius,* however, has the rupee system like that in Ceylon, and has also about $1,000,000 of government notes.

Zanzibar and *Somaliland* use the Austrian levant dollar and rupees; but the former also has a special coinage of dollars; the standard is silver, hence fluctuating at about forty-seven cents United States to the dollar.

Gibraltar uses Spanish as well as British money; *Cyprus* still retains some Turkish; *Malta* has now British coin only; *Aden* uses various kinds, chiefly rupees.

THE FRENCH SYSTEM.

Bi-metallic. Franc=19.3 cents United States. Divided into 100 centimes.

The system of France, which dates from 1803, has been adopted by most of the countries of southern Europe and in modified form by many others. Both gold and silver are in use as full legal-tender money; the gold franc being, theoretically, 4.978 grains at .900 fine, hence 4.480 grains pure (too small to coin). The silver franc of full tender power would be 77.16 grains, .900 fine, or 69.44 grains pure; actually only 5-franc pieces are struck at this rate, which gives the ratio of 15½ to 1. Only subsidiary silver has been coined since 1875, on government account; the pieces are of the same relative weight as the larger one, but are only .835 fine, hence less valuable. The 5-franc is exactly equal to two U. S. half-dollars.

A kilogram of gold .900 fine coins into 3100 francs; pure gold is worth 3444 4-9 francs per kilogram, but there is a coinage charge of 7 4-9 francs per kilogram; (kilogram=1000 grams, gram=15.432 grains; kilogram of pure gold=$640.60.)

The Latin Union States beside France, are Italy, Belgium, Switzerland and Greece; these have identical systems and co-operate to maintain silver at parity, by accepting each other's silver coins; Spain, Servia and Bulgaria have also the same system; Roumania and Finland vary only in being upon the gold standard; similar systems are found in Argentina, Bolivia, Haiti, Venezuela, Nicaragua, San Salvador, Guatemala and Honduras; and Ecuador, Peru, Colombia, Uruguay and Paraguay have some of its features.

France provides the same coins for its possessions, *Algiers, Tunis, Martinique, Guadeloupe, French Guiana, St. Pierre, Miquelon, Réunion, Pondicherry, Senegal, Gaboon,* etc.

For INDO-CHINA (Tong-King, Annam, Cambodia), where the silver standard prevails, a *piaster* (dollar) of 420 grains .900 fine is provided with divisional pieces of 50, 20 and 10 cents (*sapeks*), and smaller bronze and zinc pieces. The value of the unit fluctuates about fifty-three cents United States; to keep silver at home exportation is prohibited.

For *Madagascar* a 5-franc "dollar," with subdivisions, has been provided to supersede the old Spanish and native pieces.

THE FRENCH BANKING SYSTEM.

Paper money in France is issued only by the Bank of France, chartered in 1800, and renewed from time to time. It is a private corporation, but its chief officers are appointed by the government, which has thus a voice in its public policy. In efficiency it is not excelled by any financial institution in the world. Note-issues are authorized to the amount of 5,800 million francs (say 1,119 million dollars), without regard to capital (35 millions) and without legal provisions as to specie reserves; but the total issue must be "covered" with gold, silver, securities and commercial paper; actually very large specie reserves are held, and since the Bank may redeem notes in silver at will, it has the power to protect its gold reserves. It may require a premium to be paid for gold. It is a typical "currency bank," having relatively small deposit accounts; but its *re-discount* operations, a most important public function, are very large; it buys from other banks commercial paper as small as $2 in amount. So long as it maintains coin payments its notes are legal tender. There are over 400 branches and offices throughout the republic. Note-issues and coin holdings by years since 1896 appear upon a subsequent page.

Following is a digest of the official return of the Bank of France:

(In Francs.)

	1896.	1906.		1896.	1906.
Capital	182,500,000	182,500,000	Gold	2,050,230,760	2,791,948,843
Surplus and reserves	42,515,507	42,515,507	Silver	1,248,003,414	966,105,461
Notes outstanding ...	3,615,929,960	4,678,742,340	Securities ...	212,607,432	392,607,793
Public deposits	203,826,094	278,133,273	Loans, etc...	1,177,155,561	1,472,901,171
Other deposits	619,420,740	426,644,532	Other items..	68,971,111	158,733,212
Other items...	92,775,977	173,760,828			
Totals	4,756,968,278	5,782,296,480	Totals	4,756,968,278	5,782,296,480

The chief items in the condition of the Bank in 1907 were:

Capital and surplus.....	$ 43,000,000	Gold	$511,000,000
Deposits	140,000,000	Silver	190,000,000
Notes	916,000,000	Loans	300,000,000

The extraordinary strength of the Bank and its superior mechanism, enabled it to maintain a steady 3% discount rate for nearly seven years; the disturbances in our own system caused a rise to 3½ and 4% in 1907. The Bank controls the rates of other French banks, and with the elastic note-issuing power adapts supply of money to demands as nearly as it can possibly be done. There are a number of large banks and numerous private banking-houses; of the former three report $800,000,000 of resources, and a mortgage bank (Credit Foncier) has fully as large means.

For *Algiers* and *Tunis* there is a bank with upward of $110,000,000 of assets; one in *Indo-China* shows $40,000,000; in *Réunion* there is one with $4,000,000 and in the *French West Indies* three report $7,000,000. All of these issue notes upon substantially similar lines as is done by the great Bank.

BELGIUM.

Latin Union; bi-metallic; franc=19.3 cents.

Belgium's coins are the same as the French; a single bank established in 1850 issues notes. It is a private corporation, the government receiving a share of all dividends in excess of 6%; there is also a tax upon the note-issue in excess of $55,000,000. The notes are issued on credit; the limitation is that the amount of notes and other demand liabilities (deposits, etc.), must not exceed thrice the coin in reserve; and the notes must be specifically "covered" by cash or negotiable paper and securities. The chief items in the Bank's report early in 1907 are:

Capital	$ 9,600,000	Coin	$ 25,000,000
Deposits, etc.	17,500,000	Loans	118,000,000
Notes	141,000,000	All assets	800,000,000

The notes of the bank may be paid in silver at its discretion.

Belgium has fifty-four other banks, corporate and private, with resources of about $400,000,000.

The discount rate has been only slightly higher than that in France; 3% to 3½%; but in 1907 it rose to 5%. The CONGO STATE, supervised by Belgium, is supplied by it with silver and bronze coins (francs and subdivisions), chiefly bronze.

ITALY.

Latin Union; bi-metallic; lira=19.3 cents.

Italy's francs are known as *lire,* divided into *centesimi.* For its colonial possessions in Africa, *Eritria* and *Ethiopia,* silver *talari* are provided, of 410 grains, .900 fine, with subdivisions of 50, 25 and 10 cents, and bronze minor pieces. The value fluctuates about fifty cents United States. The talari, an imitation of Austria's levant dollar (thaler), circulates with the latter and other similar pieces throughout the countries near the Red Sea.

Soon after the Italian states were united the note-issuing power was gradually restricted, and since 1893 only three banks possess the power, the Bank of Italy having by far the greatest. Issues are on credit, but are limited to thrice the capital, unless covered by gold, but further issues are allowed, subject to a tax of 1% per annum; and coin or foreign exchange must be held to the amount of one-third the issue. The notes are legal tender, and redeemable in gold at the current rate, there being still a slight premium occasionally. Note issues are about $320,000,000, coin holdings upward of $200,000,000, so that parity should now be easily maintainable. As the capital of the issue banks is $40,000,000 there were at the time no taxed notes. Discount rates are about 5%. The three banks show resources of $750,000,000, and others about $450,000,000.

The government also issues paper, part in very small denominations covered by subsidiary coin; note-issues are about $85,000,000, coin held say $51,000,000.

SWITZERLAND.

Latin Union; bi-metallic; franc=19.3 cents.

The French coinage system is copied exactly. Hitherto notes were issued by forty banks, upon credit, requiring cover of 40% coin, the balance commercial paper and securities. In June, 1907, a central bank was established which is gradually to supersede the others in the note-issuing functions, in order to provide better regulation. Yet the previous system operated fairly, interest rates having been at 3½ to 4½% steadily.

The former note-issue banks showed, early in 1907, about $48,000,000 notes and $25,000,000 coin; deposits $340,000,000; total resources $450,000,000; other reporting banks show about $150,000,000 assets; a good exhibit for 3½ million people.

Recent reports (December 31, 1907), show the note-issues of the Federal Bank $31,000,000, coin $14,000,000; other banks, notes $25,000,000, coin $11,500,000. The new system provides for credit notes the same as the old, but a stronger coin reserve is expected.

GREECE.

Latin Union; bi-metallic; drachma=19.3 cents.

Here the franc is called by the ancient Hellenic name *drachma*, and the divisional pieces are *lepta*. The government issues notes, about $18,000,000 being in use; depreciated in value until recently about 20%, there being no coin behind them. One bank issues credit notes, which are also at a discount owing to the suspension of specie payments. The amount in use is about $23,000,000; the bank has hardly half a million of coin in hand. Its deposits are about $25,000,000. Lesser banks have in the aggregate about $30,000,000 of resources, giving for all about $85,000,000. The gold premium, September, 1907, was only 8%.

SPAIN.

Bi-metallic; peseta=19.3 cents.

The unit, equivalent to the franc, is the *peseta* of 100 *centimos*. Formerly Spain provided coins for its numerous colonies; but none of these remains to be provided for.

The sole right to issue paper money is in the Bank of Spain, capitalized at $28,900,000, and it may ordinarily issue notes on its credit to five times that amount, provided it has one-fourth thereof in coin reserve. Spain's reverses appeared to require the extension of the privilege and for a number of years the notes have been at a discount; the average premium on gold has, however,

recently fallen from 30 to 15%. Against a present circulation of about $311,000,000 the bank holds $78,000,000 gold and $129,000,000 of silver. This shows a marked increase in strength, and resumption of specie payments should be practicable at an early date. With about $105,000,000 of deposits the Bank has nearly $200,000,000 in loans. Its assets exceed $500,000,000, and other banks show about $300,000,000 of resources. By means of the liberal credit supply the Bank has held to a 4½% discount rate quite steadily.

SERVIA.

Bi-metallic; dinar=19.3 cents.

This country uses the designation *dinar* for the franc, dividing it into 100 *paras*. A single bank issues paper money to the extent of thrice the amount of the coin in reserve; about 10% of the issue is payable in gold, the balance in silver. With a capital of $1,100,000, there is a note-issue of $6,800,000; the coin reserve amounts to $4,400,000. The stability of the notes is not assured; there has been a small premium on gold (1½%) occasionally when the exchanges were unfavorable. The bank's deposits are about $600,000, its loans $2,300,000. Bank resources in all about $15,000,000. Discount rates, 1907, 6%.

BULGARIA.

Bi-metallic; lev=19.3 cents.

The *lev* is the franc; it is divided into 100 *stotinki*. Both government and bank notes are in use, the latter issued by one bank only. As in Servia part of the paper money is payable in silver, and there is occasionally a premium on gold, not higher, however, than 1½%. The amount of bank notes is limited to thrice the coin held; government notes are fully covered, and are hence coin certificates; the amount is less than $2,000,000. Of the $10,000,000 bank notes nearly 60% are of the silver class; the bank held $8,400,000 of specie; but it had also $18,000,000 of deposits; *per contra* $12,000,000 in loans; total assets about $40,000,000. No other banks report. Money stands at 7%.

ROUMANIA.

Lei=19.3 cents.

The gold standard was adopted in 1890; the franc is called *lei* and is divided into 100 *bani*. The actual money in circulation is silver, nickel and bank-notes issued by one bank, which has succeeded fairly well in maintaining the currency at par. With approximately $3,000,000 capital, there are out about $58,000,000 of notes (a recent expansion); the bank holds $17,000,000 of coin of which about 97% is gold; the law requires a 40% specie reserve, part of which may, however, be in gold bills of exchange. Deposits are small, that business being done by other banks; but the central bank has a line of loans that is respec-

table in amount, aggregating over $25,000,000. Altogether banking resources may be placed at $100,000,000. Discount rates have been quite steady at 5%.

GERMANY.

Mark=23.8 cents.

Since the unification of German states in 1871, the gold standard, with a unit differing from all others, prevails. The *mark,* of 100 *pfennige,* is equal to 23.8 cents. Its theoretic weight is 6.146 grains .900 fine or 5.531 pure gold. When the gold standard was adopted there was a large mass of old silver *thalers;* part of these were sold as bullion, and large amounts were re-coined; it is estimated that about $14,000,000 still exist in the Empire. Subsidiary silver is given a high rating; the 5-mark piece weighs 428.67 grains, giving at .900 fine 385.81 grains of pure silver; this latter is exactly the same as the *gross* weight of the 5-franc piece, and of two United States half-dollars. The kilogram of pure gold coins into 2,790 marks.

Coins are provided for the colonies in GERMAN EAST AFRICA; the principal piece is the *rupee,* to conform to the local demand; it is divided into 100 *heller* or *pesas.* This rupee contains 360 grains of silver of the standard of .916⅔ which prevails in India; but the coin is twice the weight of the Indian rupee; it would thus have double the nominal value; but as the country is upon a silver basis, the value fluctuates and is practically the same as that of the gold-backed rupee of India.

In GERMAN NEW GUINEA the coins of the mother country are used.

GERMANY'S BANKING SYSTEM

is also unique and possesses many points of excellence. The Imperial Bank has almost the monopoly of the note-issue; there remain four out of thirty-three old banks, which have note-issuing power, but as these eventually surrender the rights the Imperial Bank gains them. It has many branches, is privately owned, but may be purchased by the government; and its managers are appointed by the government. The note-issue must always be "covered" with gold or commercial paper, at least one-third coin; but it is further provided that the banks shall pay a tax at the rate of 5% per annum upon all notes in excess of the coin on hand plus a fixed sum (also covered by negotiable instruments), which is $112,500,000 in the case of the Imperial Bank and about $16,600,000 for the minor ones. Hence if the banks hold say $200,000,000 of coin any notes issued in excess of $329,100,000 must pay the tax. When therefore the demand for money (discounts) becomes active and the rate rises say to 5% or more, the permission subject to tax is availed of. It operates automatically in fact, and is regarded a very satisfactory method of assuring elasticity in volume; for as the lowering rates for money indicate a falling off of demand, the notes are naturally withdrawn, since it would not be profitable to keep them in use. The Imperial Bank is sufficiently strong to regulate the

money rate, but it is frequently constrained to permit it to go above 5% and even to 7% on occasions of extraordinary demand which it is judicious to restrain. Discount rates thus range higher in Berlin than in London, and much higher than in Paris. During the past seven years the rate fell to 3% only once, was frequently at 5% and in 1907 reached 7½%. In recent years the issue of taxed notes has been considerable; prior to the extraordinary period near the close of 1907, the maximum by quarters for seven years was $112,000,000 and exceeded $50,000,000 on eight occasions, usually in the fall months. This record does not show greater stability than in England and compared with France leaves much to be desired. Note-issues and coin holdings of German banks for a series of years, showing silver separately, appear upon a subsequent page.

The Imperial Bank's official return is given below:

(In Marks.)

	1896	1906		1896	1906
Capital	120,000,000	180,000,000	Gold and silver	871,733,000	861,956,000
Surplus	30,000,000	64,814,000	Gov't notes...	22,666,000	91,936,000
Notes	1,229,996,000	1,406,296,000	Other banks' notes	7,868,000	20,826,000
Deposits, etc..	505,094,000	595,024,000	Securities	166,532,000	59,312,000
Other items...	———	53,540,000	Loans	749,759,000	153,448,000
			Other items...	66,532,000	112,196,000
Totals	1,885,090,000	2,299,674,000	Totals	1,885,090,000	2,299,674,000

A recent statement of the Imperial Bank shows notes $456 000,000, deposits $152,000,000, coin $184,000,000, loans $412,000,000; all resources $635,000,000. It has a branch office in every town in the Empire, and makes transfers by credits free of charge for its depositors.

There are many important banking concerns in Germany; nine report total means at $1,166,000,000. There are also several large mortgage-loan banks.

Germany has also an issue of 120,000,000 marks of Treasury notes, fully covered by gold held in its "war chest," but *not redeemable.* They are largely held by banks in reserve.

AUSTRIA-HUNGARY.

Krone=20.26 cents.

This dual empire adopted the gold standard in 1892, changing its coinage system from the former florin or gulden of 100 kreutzer to the *krone* (crown) of 100 *heller;* the unit was cut in half as to weight and value. For a period paper currency was at a discount, but this condition has now disappeared.

The unit is based upon 5.228 grains of gold .900 fine=4.705 pure; 20 and 10 kronen pieces are coined. Subsidiary silver is of varying fineness (.400 to .900); the chief silver piece, 5-kronen, weighs 370.376 grains, containing 333.339 grains pure metal; giving a ratio of 14.17 to 1.

The old ducats are still coined; 53.87 grains of gold at .986 1-9 fine (the highest rate in any coin), worth $2.288. There is also coined for the Levantine trade the old Maria Teresa silver dollar (dated 1780), very popular in the country about the Red Sea; it weighs 433.08 grains .833⅓ fine=360.90 pure; it is hence worth something less than the British dollar and the Mexican peso.

AUSTRIA'S BANK

is now modeled somewhat upon the lines of that of Germany. It has the monopoly of the issue of paper money, the former government notes having practically all been redeemed. The notes must be "covered" by coin or commercial paper. A fixed amount in excess of coin may be issued free of tax, any further sums being subject to a 5% tax. According to its reports covering a period of 864 weeks (1888-1905), the note-issues showed taxed issues fifty-five times, ranging between about $9,000 and $18,000,000. In most cases the excess issue occurred during the "crop-moving" period. It was, however, not always the case that interest rates were raised above 5%; the Bank as a matter of public policy sought no profit from the additional issues. In September, 1907, the rate was 5%, in December 6%.

A recent statement of the Bank's condition showed as follows:

Capital	$ 41,900,000	Loans	$178,400,000
Deposits	32,000,000	Gold	226,600,000
Notes	393,900,000	Silver	60,800,000

This indicates that other banks have the general deposit business; those reporting show assets in excess of $1,000,000,000; the central bank's total is about $530,000,000.

PORTUGAL.

Milreis=$1.08.

The influence of Great Britain has been quite potent here for many years; thus the gold standard was adopted in 1854, the coin being of the same fineness (.916 2-3) as the British. The unit is the milreis (literally 1000 reis and expressed 1$000), which weighs 27.369 grains, containing 25.0885 grains of pure gold, slightly more than the United States dollar, hence worth $1.0804. Subsidiary silver is coined at the same fineness; the silver milreis weighing 385.8089 grains, the same as two United States half-dollars, but being of a higher fineness the pure silver is 353.658 grains. The 10-milreis piece is called the *crown*, the 1-10 (100 reis) the *testoon*. A *conto* equals 1000 milreis. The British sovereign is legal tender for 4½ milreis.

Portugal has still considerable colonial possessions; in Asia, MACAO, GOA, DAMAO, TIMOR, etc., where the Mexican peso is used except for those nearer India, in which the rupee is the unit; coins furnished by the mother country are the *xerafin* (½ rupee) and *tanga* (60 reis). In Africa the CAPE VERDE ISLANDS and AZORES use the home coins; in the West Coast colonies (ANGOLA, GUINEA,

CONGO) mixed currency, including a *macuta* of fifty reis, circulates; on the East Coast, MOZAMBIQUE, etc., rupees are used, the Portuguese *barinha,* equal to 26½ reis or one-sixteenth rupee, being a favored piece; while in DELAGOA, adjoining Natal, the British system prevails.

Paper money is issued at home by one bank, in the colonies by another.

The Bank of Portugal's notes have for some time past not been adequately secured by coin and are hence at a discount, the premium on gold ranging, however, only between 3 and 5%. The statement of its condition shows total resources about $190,000,000.

Capital, $14,600,000.	Loans, $26,500,000.
Deposits, $29,300,000.	Gold, $5,600,000.
Notes, $77,000,000.	Silver, $6,800,000.

There is no fixed reserve, but all the coin is subject to the note-issue lien in theory. Actually, of course, coin payments are suspended.

It will be observed that although a gold-standard country, silver predominates in the Bank's reserves. It is seriously proposed to alter the coinage system to that of the other Latin states, the equivalent of the franc to be called the *luso.* The discount rate is 5½%.

Banking interests show about $300,000,000 of resources, including the central institution.

THE NETHERLANDS.

Bi-metallic; florin=40.2 cents.

The Dutch unit is the *florin* (formerly guilder) of 100 *cents* (stivers); and the same system prevails in the colonies, *Java, Sumatra,* etc., in the East Indies, *Guiana* and *Curacao* in America. In gold the florin would weigh 10.37 grains, at .900 fine, or 9.33 grains pure, hence 40.195 cents United States. Full legal tender silver is .945 fine, giving 154.32 grains standard or 145.84 pure, to the florin; a ratio of 15⅝ to 1. The gold coin is the 10-florin piece; in silver the rixdaler (2½ florins), weighing the same as two half-dollars United States but better because the fineness is higher, the florin and half-florin are also legal tender. Subsidiary coin is only .640 fine. The cent is of course only four-tenths of a cent, United States. Silver is maintained at parity by law, coinage being suspended except on government account since 1875.

Paper currency is issued by a central bank, upon credit, subject to 40% coin reserve (which, however, is also against deposits); the balance in negotiable instruments. A recent statement of the Bank shows about $8,000,000 capital, $110,000,000 notes, $5,600,000 deposits; gold $30,000,000, silver $27,000,000, loans $62,000,000; with $130,000,000 of assets. Other reporting banks show $156,000,000 of means; many opulent private banks exist. Discount rates are higher than in Belgium, running at 4 to 5%.

A central bank in *Java* provides paper for the East Indian colonies upon similar lines; it has means about $28,000,000, of which $24,000,000 stand against notes. A small bank operates in *Dutch Guiana.*

The Netherlands have the oldest bank in existence, that of Amsterdam, founded in 1659; the central bank dates from 1814.

There are still about 7,000,000 florins of former government notes not retired.

SWEDEN, NORWAY, DENMARK.

Scandinavian Union.

Krone=26.8 cents.

These states have had the gold standard since 1875, with the *krone* (crown) of 100 *öre* as the unit. Theoretically it is 6.914 grains, of .900 fineness, or 6.223 grains pure gold. There are 20, 10 and 5-kronor pieces. The chief silver pieces are .800 fine, the lesser ones .600 and .400. The silver krone weighs 115.74 grains, of which 92.59 is pure metal.

Denmark has possessions: *Greenland* and *Iceland,* where the same system prevails; and the small West India islands *Santa Cruz* and *St. Thomas,* where a dollar of 100 *bits* circulates.

Sweden provides bank-notes through the Royal Bank; formerly others also issued paper. The Royal was established in 1668 and is owned by the government; its notes are legal tender, and are issuable only to 130,000,000 kronor in excess of gold on hand or in foreign banks; but the former must amount to at least 10,000,000 kronor. Actually about $60,000,000 in notes are issued on which the bank holds $26,000,000 coin. The discount rate is at 5 to 6%. Banking resources for the central and twenty-nine other banks aggregate $606,000,000; the central alone has about one-fifth.

Norway has also a single issue-bank founded in 1814, controlled by the state, which owns a majority of the shares. Notes may be emitted to twice the gold in bank or in foreign banks. The actual issues are about $21,000,000 against $8,000,000 coin on hand. The notes are legal tender. Money is steady at 5%.

The resources of the national bank are about $30,000,000; others have $80,000,000.

Denmark's bank dates from 1818; it is privately owned but under strict supervision. It may issue legal tender notes to a sum 30,000,000 kronor in excess of its gold in hand; the actual issues are about $33,000,000 upon $21,000,000 coin. Rates for money are fairly steady at 5 to 6%. Banking resources are about $175,000,000; the national bank having about $45,000,000.

In 1907 the interest rate rose to 8% upon a loss of about 4 millions of gold.

RUSSIA.

Ruble=51.46 cents.

The monetary system adopted in 1899 is based upon the gold standard. The *ruble* of 100 *copecks* is the unit; its theoretic weight being 13.2758 grains .900 fine, hence 11.9483 grains pure, equal to 51.456 cents United States; for-

merly the ruble was 77.2 cents, or 50% more valuable. The gold coinage accords with that of France, since 7½ rubles are exactly the same as 20 francs; or ruble=$2^{2}/_{3}$ francs. Of the silver coins the ruble, one-half and one-fourth ruble are .900 fine; the smaller pieces only .500. The chief coin weighs 308.58 grains, giving 277.72 grains pure metal. The smallest coin (bronze) is the one-fourth copeck, which is rated at .12 of a cent.

For many years the country had had depreciated paper and the silver standard. The chief circulating media are silver, and bank notes issued by the Imperial Bank, which is owned by the government and conducted as part of its finance department. By heavy foreign loans sufficient gold was secured to resume specie payments at the new rate (51.46 cent ruble in place of 77.2 cent ruble), and with the exception of part of the time during the war with Japan the notes have been at par. The law requires the coin reserve to be two-thirds of the issue, and in normal periods this ratio has actually been exceeded at times. The Bank shows as follows in April, 1907:

Capital	$ 27,500,000	Gold in bank	$458,500,000
Notes	582,200,000	Gold abroad	135,700,000
Deposits	235,600,000	Silver	30,300,000
Government balance	54,200,000	Loans and securities	270,400,000
Other items	35,300,000	Other	39.900,000
Total	$934,800,000	Total	$934,800,000

Other banks reporting show $600,000,000 of resources. There are also large mortgage-loan banks. Discount rates are 5½ to 7%. The government is reported to have considerable gold in a "war-chest."

FINLAND.

Mark=19.3 cents.

This grand duchy has a system independent of the Russian, and like the French, but with the single gold standard; the franc is called the *mark*, divided into 100 *penni*. Subsidiary silver is .868 and .750 fine. One bank, capital $1,000,000, issues notes, about $18,000,000 on coin reserves of $5,000,000. Interest rates are usually lower than in Russia, ranging at 5 to 5½%.

TURKEY.

Piaster=4.4 cents. £T=$4.396.

The Turkish unit, the *piaster*, is not to be confounded with the French piaster used in the Orient, or the Mexican peso sometimes known by that name. For this piaster is worth only 4.396 cents United States; it is divided into 40 *paras*, so that the latter is .11 of a cent. The *lira* or pound (£T) sometimes called the *medjidié*, is equal to 100 piasters, actual value $4.3964, weighing 111.366 grains of British fineness ($.916^{2}/_{3}$), hence the pure gold content is 102.085. Silver is coined at .830 fine nominal, but the unreliability of Turkish

coins is almost proverbial; the government in fact recently lowered the piasters so that it took 108 to the pound, equivalent to a premium on gold. Turkey is by some classed as bi-metallic, but the facts do not warrant this.

Formerly government notes existed, but they were at least partially repudiated. Bank notes are issued by the Imperial Ottoman Bank, owned by British and French interests; capitalized at $25,000,000, it issues say $6,000,000 notes, has over $12,000,000 coin on hand, about $58,000,000 of deposits and over $35,000,000 in loans; total resources about $98,000,000.

This system prevails in Asiatic Turkey (ASIA MINOR), but not entirely in Arabia and Tripoli, and not at all in the dependency Egypt; nor in Bulgaria, which has its own system, already described.

ARABIA has several coins; the *makkathaler* of eighty *cabir,* equal to about 83.8 cents United States, the *krusch* of forty *diwani,* of half that value; the *mahmudi* of twenty *gass,* equal to about 4.8 cents United States.

TRIPOLI has the piaster, twenty of which equal a *mahbub,* the value of which is nominally eighty cents United States. But since the standard is probably silver this value is more nearly forty cents.

EGYPT has had its own peculiar system since 1885, with the gold standard. The *pound* (£E) of 100 *piasters,* each divided into 10 *ochr-el-guerche,* is worth $4.943, being thus the largest unit in actual use. It weighs 131.175; is .875 fine, the pure gold content being 114.778. Silver is coined at .833⅓ fine, the largest piece being 432.1059 grains, or 360.0883 fine, and is one-fifth £E, equal to 98.96 cents. The ochr-el-guerche is .49 of a cent, and is divided into quarters in coinage.

One bank issues notes from $10,000,000 to $12,000,000, covered by securities deposited with the government and gold. This and two other banks now show $20,000,000 capital and over $100,000,000 resources.

MOROCCO has still the old silver standard; the chief piece is the *rial* of 10 *okia* (ounce); the latter is nominally about ten cents United States. The okia is divided into four *blankeels* of six *floo* each.

JAPAN.

Yen=49.8 cents.

This progressive country has adopted the monetary plans of the most advanced type after experimenting with others. Departing from its ancient *cobang* and *itzebu* coinage, it became a double standard country, then lapsed into the silver standard, but finally (1897) the gold standard was fixed. So also as to paper currency; after proving the inutility of a national bank system like that of the United States, with bond-secured notes issued by numerous banks, it superseded this with a central bank.

The unit is the *yen* of 100 *sen,* each of ten *rin;* under the double standard the yen was 99.7 cents United States, hence the rin about one mill; when the gold standard was adopted the valuation of the unit was reduced to the ap-

proximate value of silver, hence the yen is 49.84 cents. The theoretic weight of the unit is 12.86 grains, .900 fine, equals 11.574 grains pure gold. Silver is coined at .800 fine, the one-half yen being a piece of 208 grains, containing 166.40 grains pure metal. The smallest coin is the 5-rin piece, equal to .24 of a cent.

The Bank of Japan may issue notes to the extent of 120,000,000 yen upon securities; then it may issue any amount upon specie; and finally it may issue further sums upon credit subject to a tax of 5% per annum. There has been a marked fall in the interest rate since the bank reform, except during the war with Russia. Formerly 12% was usual; latterly it has been under 8%.

The Bank's capital, all of which is owned by individuals, is $15,000,000; the note issues recently have amounted to $150,000,000, against $76,000,000 of specie, chiefly gold; this indicates about $20,000,000 of taxed credit notes, which were issued largely during the recent war. Obviously the system affords means for elasticity subject to the tax. The deposits of the Bank except those held for the government are only about $5,000,000; government deposits $246,000,000; loans amounted to $83,300,000. Against the large government deposits the Bank held substantial sums in foreign banks for government account, chiefly in London, for business growing out of the loans made necessary by the war with Russia. Total assets are $400,000,000.

The independent banks are numerous; the Yokohama Specie Bank, designed specially for foreign trade, has means amounting to $118,000,000; others show $540,000,000 of resources.

FORMOSA is supplied by Japan with coins, since its cession by China; there is also a note-issuing bank provided, with about $11,500,000 of resources.

KOREA, which has recently come under the dominion of the Japanese, has now also the Japanese system although no local bank exists. The former currency of *yang* and *cash* (derived from China), is rapidly being superseded by Japanese money, including notes as small as 10-sen, amounting to about 10,000,000 yen, issued by branches of Japanese banks.

CHINA.

Tael of 1000 cash; fluctuating.

That the "celestial empire" has the oldest record of both coin and paper currency is beyond dispute, even if we hesitate to accept without question the date (2500 B. C.), which the local historians claim as that when coin was first used. The ancient unit, the *tael,* continues to be used; it is actually a weight, and as so frequently happens, each province has a slightly different equivalent. Thus the variation in value of the silver in the sixteen kinds of taels is from 72.6 cents for the Shanghai to 80.8 cents for the Haikwan, or customs tael, which latter is most generally used; it contains 590.35 grains of pure silver, almost 60 per cent. more than is in the United States dollar.

Taels usually circulate in the shape of slugs or small bars.

The division of the tael is into 10 *mace*, each of 10 *candareens*, each of 10 *li*

or *cash;* thus tael=1,000 cash; the last named a coin of composite metal near brass, with a square hole through its center (for stringing purposes), the value of which is .7 to .8 of a mill United States. It is the chief coin in use among the 400,000,000 of people.

The Mexican peso and British dollar also circulate at the ports; these and all other coins are "chopped"; *i. e.,* stamped with a character to indicate their genuineness, by some local Chinese trader of standing, which makes them acceptable throughout the empire.

China has mints and several attempts have been made to issue coins like those of other nations: dollars, halves, fifths, etc; the innovation, begun in 1890, has only now reached a point where it promises a successful outcome, by reason of the assimilation of the proposed coins to the tael system. The suggested establishment of a gold parity as in India, has been found impracticable, it being of paramount importance to have a relation between silver and the copper coins and cash. Under the impulse of the reform, enormous quantities of copper have been imported and coined into divisional pieces (chiefly 10-cash), about 6,400,000,000 having been struck. This actually disturbed conditions. There are innumerable instances of fluctuations of the exchange value of the coins.

The new system if and when finally settled, will give a unit (tael) weighing 575.82 grains of silver nominally .998 fine, actually somewhat less. It will hence still continue necessary to consider China as having a very variable standard money.

Paper currency issued by provincial governments circulates freely; also local bank notes; their character cannot be determined with any degree of accuracy. Notes of the Hong Kong and Shanghai Bank, a British institution, are also used.

Tibet also uses the Chinese system. In *Manchuria* Russian money is gradually being superseded by that of Japan, including notes; government "war notes" came into use in 1905; now the Yokohama Bank issues its own, well covered by coin.

SIAM.

Tical of 64 lot; fluctuating.

It is only recently that this country has worked away from its "cowrie-shell" currency, adopting western methods. The unit of ancient times (*tical*) continues to be used; it is a weight and doubtless derived from tael. In adjusting the new system due attention was given to the relation of value of the tical to the Mexican peso, which performed the chief money functions for many years. Nominally the gold standard with silver currency was adopted in 1903, but the adjustment is not as yet permanent. Generally speaking the value of the tical is 60 cents Mexican or 30 cents United States. About 10,000,000 ticals in government notes circulate; a small remnant of bank notes remains to be retired. The former are used to assist in the money reform and are covered by silver coin and bonds.

The tical (also known as the *bat*) is divided into 4 *salung* each of 2 *fuang*, each of 4 *at*, each of 2 *lot*. The two last-named are of pewter.

The weight of the tical is fixed at 231.48 grains, .900 fine, hence 208.34 grains pure silver.

The former money was partly in the form of wire circlets, and cowrie shells had a rating by which 110 were valued at 1 cent United States.

PERSIA.

Kran of 20 chais; fluctuating.

A silver-standard country; the *kran*, with 71.065 grains of silver .900 fine, 63.959 grains pure, being worth about 8.8 cents United States *actual*, is the unit; it is divided into 2 *penebats* of 10 *shabis* (or *chais*) each; on the other hand 10 krans equal one *toman*, a gold coin worth $1.704, having 39.583 grains of pure gold; its weight is 43.981 grains .900 fine. Actually the fineness of Persian coins is not to be relied upon unless the recent political change has caused a reform. There is also a minor piece rated at one-fifth of a kran, known as the *abassi;* and theoretically the *dinar*, which is one-thousandth of a kran.

Paper money is issued by the Imperial Bank; the amount in use has recently been in excess of $2,200,000; sometimes fully covered by coin, sometimes only to 60 per cent. The resources of the Imperial Bank foot up about $10,000,000. It is controlled by British interests.

AFGHANISTAN has no monetary system; rupees from India and rubles from Russia circulate freely. The same may be said of BALUCHISTAN, except that the Russian influence is less; whereas in BOKHARA, KHIVA and TURKISTAN the ruble is the chief money, although little is used. A coin known as the *mak-kataler* circulates at about 48 cents United States in value; probably the same as the Austrian Maria Teresa dollar.

SIBERIA of course uses the Russian system, which has extended also into parts of MANCHURIA. Both coin and bank notes circulate.

BURMAH uses the peacock rupee, which is struck for it in India, having the same content as that of the surrounding country.

ABYSSINIA uses the *talari*, already mentioned, and the Austrian levant dollar, nominally 99.4 cents, but actually worth about one-half. A bank has been organized, but no data are as yet available.

PHILIPPINE ISLANDS.

Peso=50 cents.

The ancient Spanish-Mexican system has now practically gone. The new system, as discussed elsewhere, is the *peso* of gold of 12.9 grains .900 fine; hence just half a dollar United States in value; a silver peso of 416 grains

.900 fine, with divisional pieces of exact proportions were also provided for; the peso is divisible into 100 *centavos;* nickel and bronze pieces, the latter as low as ½ centavo were authorized. This gave a ratio of gold to silver of nearly 32½ to 1; the silver peso having the arbitrary value of 50 cents United States. To maintain this coin at parity a redemption and exchange fund was established; but when the price of silver rose, the coin was exported. Hence the fineness has been lowered to .700, which will very probably keep it at home.

Silver certificates are issued for the pesos: 16,000,000 pesos are in use. A bank chartered by Spain still has note-issuing power to about $4,500,000 and uses it to a little more than 2,000,000 pesos, with a fair reserve. Branches of two British and one American bank do general business: deposits of all are about 15,000,000 pesos ($7,500,000); total assets about $17,500,000.

ARGENTINA.

Peso of 100 centavos; depreciated paper.

With its commercial and industrial development this country is emerging from the régime of heavily depreciated paper. The unit is the *peso,* also divided as in Spanish times into 8 *reals;* in gold 24.89 grains .900 fine, or 22.40 grains pure, equal to 96.48 cents United States, the same as 5-franc gold; in silver it is 385.81 grains .900 fine, hence also like the French; but subsidiary silver is also .900 fine. Gold coins are the *argentino* and half thereof; the former 5 pesos.

Actually depreciated government notes perform the functions: steps were taken in 1899 to acquire gold and fix a rate for paper at *227.27%,* so that the paper peso is worth 44 cents gold. Some of the notes are not so exchangeable, nearly one-half of the 518,000,000 pesos being "unguaranteed." There is over $100,000,000 gold in the exchange fund (*caja de conversion*). Nickel and copper pieces perform the subsidiary functions. The commercial position of the country should soon render it possible to further improve the currency.

The National Bank has a capital of 50,000,000 pesos paper; assets about six times that sum.

Banking interests are important, although in large part in foreign hands; British, French, German, Italian and Spanish. Seven banks report total resources nearly 120,000,000 pesos gold and 900,000,000 pesos paper, accounts being kept separately. This would mean fully $500,000,000 gold values, of which deposits are 70%.

BRAZIL.

Milreis of 1,000 reis; depreciated paper.

As a former colonial possession of Portugal, the money of this country is also the *milreis* and nominally the gold standard has prevailed for over fifty years; actually the milreis has only about half the value of that of Portugal and depreciated paper has been the money of the country for many years. The

milreis is 13.835 grains of gold .917 fine, hence 12.686 grains pure metal, worth 54.6 cents United States; the silver milreis contains 180.43 grains pure silver. Silver was formerly coined at .917 fine; this has been changed to .900 fineness. The division is of course into 1,000 *reis*, hence the rei is nominally ½ mill United States.

Paper money was formerly issued both by government and banks; in recent years, however (since 1898), the government in accord with a plan to bring the currency to parity with gold, has assumed all the note-issuing functions. Considerable progress has been made in this direction, bonds having been sold for gold; the premium upon gold being now 77% compared with 350% formerly. The volume of notes has been reduced by over 100,000,000 milreis. The arbitrary parity of the government fixes the value of the milreis at 15 pence (say 30 cents).

The note-issue amounts to 668,347,000 milreis (expressed 668,347,000,$000) or about $334,000,000, nominal value; aside from this there is only a large amount of nickel and bronze coin in use.

The National Bank is capitalized at 5,000,000 milreis and has about six times that sum in resources.

Banking interests are considerable; three banks chartered by Great Britain, one by Italy, and one by Germany do extensive business; in the aggregate the banking capital may be placed at $60,000,000 with total resources $200,000,000 (gold values) as a minimum; reports are not required, hence no complete statements are available.

CHILE.

Peso of 100 centavos; depreciated paper.

Adopting the gold standard in 1895, this enterprising republic has endeavored ever since to recover from the depreciated paper currency régime, but has not yet succeeded. The law of 1895 caused a departure from the ancient Spanish money system, under which the old *peso* was materially reduced, its value being now only 36.5 cents United States, out of harmony with all other systems, but approximating the British; indeed sovereigns are legal tender in Chili, on a basis of a theoretic parity of $13^1/_3$ pesos to the £. The weight of the gold peso (in theory) is 9.245 grains $.916^2/_3$ fine, hence 8.475 pure gold. Silver coin was provided for at .835 fine, giving the peso 257.72 grains pure metal, an unwise ratio of 30.4 to 1, likely to cause exports of coin if silver rose in price: the fineness was hence reduced to .700. The peso is divided into 100 centavos, giving the latter a value of .365 of a cent United States. Gold coins are *escudo* (5 pesos), *doubloon* (10 pesos), and *condor* (20 pesos); the latter worth $7.30.

Depreciated government notes perform the functions of money: the amount was recently increased from 80,000,000 pesos to 120,000,000 pesos; it is reported that the government has gold in the sum of 74,000,000 pesos in foreign banks as reserve; yet the premium on gold remains high (15 to 70%, according to exchanges), showing an unsatisfactory reserve condition.

Banks show about $30,000,000 capital; all resources about $100,000,000.

PERU.

£P=$4.86⅔.

In the reform of the money system of Peru in 1897 the gold standard was adopted, the unit provided for being the *libra* (pound, £P) exactly equal to the British £, containing 113.001 grains of pure gold, coinage at .916⅔ fine; hence equal to $4.86⅔. The silver coins are .900 fine, the chief piece, the *sol,* containing 347.228 grains of pure metal (the same as the 5-franc), giving a ratio of 31 to 1, which may operate to cause an outflow of silver. Divisional coins on the basis of hundredths of the sol, are the ½, ⅕, 1/10 (*dinero*) and 1/20 sol. The £P=10 sols; sol=48⅔ cents; the silver in the sol at 70 cents per ounce would be worth more than 50 cents. Hence the export of silver is prohibited by law.

Paper money has been prohibited after a disastrous experience with depreciated government notes, which were practically repudiated about ten years ago.

Banking is somewhat limited, foreigners having control of the most important part. Capital and surplus of four banks whose reports are available are $5,000,000, and total resources $18,000,000. Gold holdings are reported to be $3,000,000, silver $4,000,000.

ECUADOR.

Sucre=48⅔ cents.

Ecuador also adopted the gold standard under British influences with a gold piece (10 *sucres*) of exactly the same value as the £ ($4.86⅔); it is of 125.56 grains weight .900 fine, thus giving the same pure gold content 113.001 grains. The silver *sucre* is 347.228 grains of pure metal (coinage at .900), which gives another example of unwise ratio of 31 to 1. The divisional pieces are the *peseta* (⅕ sucre), *real* (1/10) and *medio-real* (1/20). The sucre is thus exactly the weight of a 5-franc piece, but has only half its value; and the peseta is worth one-half that of Spain.

Paper currency is issued by banks, two of which report nearly $3,400,000 of notes out and about $2,000,000 gold and silver on hand; total resources being about $12,500,000.

BOLIVIA.

Boliviano of 100 centavos; fluctuating.

This interior republic remains a silver-standard country. The unit, called the *boliviano* of 100 *centavos,* is exactly the same as the Peruvian sol, the sucre of Ecuador, the peso of Argentina, and the 5-franc piece; but its value fluctuates with the price of silver; it is about 46.5 cents. (Gross weight is 385.8089 grains, fineness .900, pure metal 347.228.) Divisional pieces are also .900 fine.

Paper currency is issued by banks, three in number, in amount about 8,500,000 bolivianos, against which they have about 4,000,000 bolivianos of coin; the

notes are maintained at par in silver. The assets of the banks exceed 25,000,000 bolivianos, say $12,500,000.

URUGUAY.

Peso=$1.034.

This little republic has always maintained the gold standard, but has no large amount of gold coin of its own. The gold *peso* or unit is worth $1.034, containing 26.188 grains .916⅔ fine or 24.006 grains pure metal. The silver peso is the same as the other South American units and the 5-franc piece; 385.8089 grains .900 fine; smaller coins are exact subdivisions; 100 *centavos* are equal to one peso. The combination of two systems makes a unique one.

Bank notes are issued by three institutions, one local, one British, one Italian; the amount of notes is about 10,000,000 pesos, probably fully covered at all times, although half the issue of the Uruguayan bank is payable in silver at its option. Note issues are limited to one-half the paid up capital.

Banking is quite extensive, the assets of the three institutions aggregating about $100,000,000.

PARAGUAY.

Peso of 8 reals; depreciated.

Nominally the *peso* of 8 *reals,* of the old Spanish system, continues the unit. Actually there is no fixed system, the country being disorganized periodically; gold is at a high premium (800 to 1,000%), and almost any kind of money is accepted. Recently Argentina's coins were made legal tender, at a rate indicating that the Paraguayan paper currency, of which there is said to be 35,000,000 pesos in use, is worth only a small fraction of its face. This is a government issue, and, with nickel coin, forms the chief medium.

The peso is also divided into 100 *centavos;* the historic gold *onza* (ounce) is rated as 17½ pesos, which would give a peso, if the system were re-established, 21.014 grains pure gold, or 90½ cents United States. Actually the old peso was equal to 89.9 cents.

There are no reporting banks; branches of institutions of neighboring countries and private concerns do the business.

A reform is proposed, with a central bank largely capitalized, and coinage upon the gold standard.

COLOMBIA.

Peso of 10 reals; depreciated paper.

After the civil war the government of this country adopted the gold standard and soon thereafter established a central bank to reform the currency. There was about 1,000,000,000 pesos of paper in circulation at a rating which may be put at 10,000 for 1 of gold. Some of this has been destroyed, but fully 75%

thereof remains and is now officially rated at 100 to 1 and is in use upon that basis in the absence of coin.

The new *peso* is exactly the same as the United States dollar; it is divided into 10 *reals* or 100 *centavos;* subsidiary silver is to be .900 fine, with 383.17 grains to the half-dollar, a ratio of 33 to 1, an unwise rating. There is also to be a *peseta* ($^1/_5$ peso), and nickel and bronze minor coins.

The central bank is capitalized at $8,000,000 gold; no reports are available.

Colombia has been one of the greatest producers of gold and silver, and is still very rich in mineral wealth, needing only development. There is thus a prospect that the money conditions may be ultimately as satisfactory as is planned.

VENEZUELA.

Bolivar=19.3 cents.

The *bolivar* is the unit, identically the same as the franc, the French system having been adopted almost completely. The bolivar is divided into 20 *centavos.* Silver is in law only subsidiary and, except as to the 5-bolivar piece, is only .835 fine. The piece last named, also known as *venezolano,* is in gold 24.89 grains .900 fine, in silver 385.8089 of the same fineness; ratio 15½ to 1; value 96.5 cents United States. When the term venezolano is used the division is into 100 centavos.

There is a small premium upon gold, 1@3%.

Bank notes are used to the amount of about 4,000,000 bolivars; the banks hold about 2,500,000 bolivars in gold and 7,000,000 bolivars in silver; and show about 90,000,000 bolivars (say $18,000,000) of resources.

PANAMA.

Balboa=$1.00.

In this new republic the gold standard with the *balboa* as the unit, was adopted in 1904. The unit is the same as that of the United States, 25.8 grains gold .900 fine. Silver pieces are the *peso* of 385.8 grains .900 fine, arbitrary value 50 cents United States, although just twice the weight of the United States half-dollar. Smaller pieces are in proportion. The silver coins are maintained at par by a 15% guaranty fund in gold. United States gold coins are full legal tender (as they circulate in the Panama zone belonging to that country) and its paper is also accepted.

COSTA RICA.

Colon=46.5 cents.

The gold standard was adopted in 1896, the unit being the *colon* of 100 *centimos;* the unit is 12 grains of gold .900 fine, hence worth 46.5 cents United States. Subsidiary silver is coined at .750 fineness, and there is also a centimo

of nickel, worth less than ½ cent, provided for. The former silver pieces were .900 fine for the larger and .835 for the smaller ones; the new rate will thus keep silver at home. Two banks issue notes on a 50% coin reserve; the amount is about 3,500,000 colones, fairly covered with coin; the assets of these banks and another issuing no notes, amount to about 12,600,000 colones, say $6,000,000.

San Salvador—Honduras.

Peso of 100 centimos; fluctuating.

These silver standard countries use the *peso* exactly equal to the 5-franc piece, but only half the value. Nominally of 22.4 grains pure gold, and 347.228 grains pure silver; subsidiary pieces are only .835 fine. The old Spanish *onza* of 417⅜ grains .875 fine was equal to $15.74 United States.

San Salvador has about 4,000,000 pesos of bank notes against which 1,600,000 pesos of silver in bank maintains parity. Bank resources are about $6,000,000.

Honduras has about 500,000 pesos of bank notes also well secured by coin; bank assets are reported at $1,200,000.

Guatemala—Nicaragua.

Peso of 100 centimos; depreciated paper.

The coinage system is the same as in the two preceding Central American states, but the currency is badly depreciated paper.

Guatemala has both bank and government notes, 44,000,000 pesos of the former and 6,000,000 of the latter; substantially no coin reserves; gold is quoted at 1,000. Bank assets are placed at about $5,000,000 actual, but may be less.

Nicaragua has 7,000,000 pesos of bank notes without reserves; gold is at 500%; bank assets are probably $3,000,000.

Haiti.

Gourde of 100 centimes; depreciated paper.

This island retains the French system, established when it was a colony of France. The unit is the *gourde,* equal to the 5-franc piece; in gold 24.89 grains, in silver 385.81 grains; these coins are .900 fine; silver subdivisions only .835 fine. The value is 96.5 cents United States. Actually United States and French gold is used, but the standard is unstable. Divisional coins are *centimes,* 100 to the gourde.

Paper currency to the amount of about 11,000,000 gourdes is in circulation, issued by the government, which superseded the bank issues. There is no substantial reserve and gold is at a premium of from 450 to 600%. A nickel coinage of 1,000,000 gourdes has recently been authorized to supply the people with *much needed* "change," silver having been exported.

SANTO DOMINGO.

Peso=$1.00.

Since the advent of the supervision by the United States (1905) the old Spanish-French system has been superseded by that of the United States, which gives a new *peso*. Thus the old peso of silver (the same as the 5-franc piece) is reduced in value to 40 cents. The old silver and token money is in use at the new rating, and United States money of several kinds also circulates. Banking interest are not important and are chiefly in foreign hands.

CUBA.

Peso=96.5 cents.

Here the old Spanish system is in process of modification to that of the United States. The old system was never exclusively used, as the Mexican *peso* of 100 centimos prevailed. This peso was equal to 5 Spanish pesetas, hence 96.5 cents United States. The *alfonsino* (25 pesetas) is still in use at $4.82; and the Isabella doubloon (129.43 grains .900 fine) is rated at 5.01^{3}/_{8}$, the *onza* of $417^{3}/_{8}$ grains .875 fine at $15.74. Subsidiary silver of the old types is used.

Paper money of the United States circulates freely. The National bank, capital $5,000,000, all resources $16,500,000, and branches of Canadian and United States banks, do business.

MEXICO.

Peso=49.8 cents.

The monetary reform of 1905 marked the passing into history of the ancient Mexican peso which enjoyed a wide circulation almost since the days of Cortez; fully 3,500,000,000 of these pieces have been coined. The new system is gold-standard-silver-currency with a *peso* half the value of the old coin, somewhat in accord with the prevailing market value. In gold the coin would be 12.86 grains .900 fine, hence 11.574 pure, equal to 49.8 cents United States; in silver it is unchanged, being still 417.8 grains .9027 fine, but there is to be coinage only on government account and of new design. Parity is maintained by a gold exchange fund. Subsidiary coin is lighter: 192.9 grains to the ½ peso, and .800 fine. Imports of old pesos are prohibited. Divisional pieces are in *centavos* (100 to the peso).

Bank notes are issued by 28 concerns of which two issue more than one-half. The issue is supervised by the government inspectors located in each bank, who countersign the notes. Metallic reserves are always large.

Mexico's development is exhibited in the following table of bank conditions, stated in millions of pesos in 1897 and millions of dollars in 1907:

	1897.	1907.		1897.	1907.
Capital and surplus	32.9	218.6	Loans	56.1	342.2
Note issues	40.9	98.3	Debtor accounts	27.8	306.6
Deposits and current accts	53.6	387.2	Cash: Specie	46.2	67.5
Other items	2.7	18.2	Notes		6.0
Totals	130.1	722.3	Totals	130.1	722.3

Of the specie in 1907 nearly $49,000,000 was gold.

Porto Rico.

Dollar, United States.

When the United States took possession of this island, the old Spanish coin was redeemed with pieces of the United States coinage; the banking is done under the laws of the United States. There are 10 banks with $9,500,000 resources; only one is a national institution.

Hawaii.

Dollar, United States.

Here also the introduction of the United States system is complete. There are 9 banks of which 4 are national; total resources are $12,000,000.

The most striking feature in the foreign money systems is the note-issuing central bank; even where the power of emission is not concentrated in one institution as in Germany and Italy, the one chief bank is preponderant. In Scotland, Ireland and Canada the deviation from the system is suggestive for imitation where similar conditions prevail. Japan, Sweden and now Switzerland adopted the prevailing system superseding a multiple bank system.

Government notes are not favored by the most prominent commercial nations; and, except in a few cases, where they exist the currency is in a depreciated condition. Canada is the most noteworthy exception, and in India the conditions are peculiarly favorable to the unique system which operates there.

In none of the cases has the situation leading to the adoption of the central bank plan been identical with that which we have before us in the United States. Japan had, it is true, the same national bank system, with bond-secured notes; but the reform there took away from the individual banks the privilege of note-issuing. Such a radical step would be impracticable with us, and very probably unwise, since we have a much larger territory to consider; we have so many distinct communities with varying local needs, which are best served primarily by local institutions.

THE WORLD'S MONEY SUPPLY

STOCKS OF MONEY—NOTE-ISSUES AND RESERVES—BANKING POWER—SAVINGS BANKS.

The statistics of the coinage of precious metals in modern times indicate that the aggregate has been about $22,900,000,000, of which somewhat more than one-half was gold. The following approximate data relating thereto are of interest:

	Gold.	Silver, coining value.
Recorded production since 1492	$12,100,000,000	$12,800,000,000
Coinage (including recoinages)	12,200,000,000	10,700,000,000
Estimated monetary stock	6,900,000,000	3,300,000,000
Add for depreciated values		600,000,000
Product not in monetary use	5,200,000,000	8,900,000,000

This discrepancy is indicative of enormous values used in the arts; for although very considerable amounts of both metals have been lost, and it is known that India, China and Egypt have large hoards practically useless for monetary purposes, the estimates on these accounts leave about half of the difference unaccounted for.

The estimates of the monetary stock in use have been very materially improved in recent years; the one which is regarded the best, and which is quoted generally abroad as well as here, is that prepared annually by the Director of the United States Mint. In the following table a comparison of these estimates, in digested form, giving the reported stocks by grand divisions of the world for 1879, 1883, 1893, 1903 and 1906, is presented; also the reported population and amounts per capita.

It will be observed that in certain years some countries, in other years others, are not included; some countries are not reported at all. The results are hence not sufficiently accurate as a whole to furnish an absolute basis for argument; they are, however, useful for general purposes. The densely populated regions of Asia, and the greater part of Africa, have their money needs provided for chiefly by coins of base metal, of which billions of pieces have been struck; thus in China the *cash*. Large amounts of such coins are also used in every other country, nickel having in recent years been supplied in place of subsidiary silver, notably in South America and Southern Europe.

It is impossible to estimate the amount of base-metal coin in use even approximately; a guess that the nominal value is $500,000,000 is probably within the facts.

1.—*The World's Money Supply at the End of the Years Given.*

(In Millions of Dollars.)

Grand Divisions and Years	Gold	Full Tender Silver	Subsidiary Silver	Uncovered Notes	Total	Population	Per Capita	Gold Per Capita
Europe—								
1879	2278	916	350	1492	5036	326[1]	$15.45	$6.99
1883	2415	969	350	1291	5025	357[1]	14.07	6.76
1893	2955	908	500	1473	5836	423[1]	13.78	6.98
1903	3802	540	759	1217	6318	441[1]	14.32	8.62
1906	4255	450	873	1429	7007	463[1]	15.13	9.19
Asia—								
1879[2]	100	1066	...	132	1298	224	5.80	.45
1883[3]	93	1084	...	66	1243	296	4.20	.31
1893[4]	80	1887	16	37	2020	701	2.88	.11
1903[5]	134	1099[6]	33	97	1363	685	1.99	.19
1906[5]	418	1040[6]	55	159	1672	689	2.42	.61
North America—	438	115						
1879			86	450	1089	68	16.01	6.44
1883	665	228	81	408	1382	70	19.89	9.50
1893	666	611	82	511	1870	92	20.33	7.24
1903	1400	625	119	648	2792	108	25.85	13.96
1906	1737	630	147	805	3319	112	29.63	15.51
South America—								
1879[12]	6	9	7	478	500	19	26.32	.32
1883[12]	17	24	5	215	261[13]	27	9.66	.63
1893	40	30	...	550	620	36	17.22	1.11
1903	92	4	11	1459[7]	1656	39	42.46	2.55
1906	153	4	16	1739[14]	1912	42	45.52	3.64
Africa and Australasia—								
1879[8]	70	6	2	...	78	6	13.00	11.66
1883[9]	104	6	8	4	122	7	17.43	14.86
1893[10]	225	...	22	...	247	12	20.58	18.33
1903[11]	258	...	23	...	281	22	12.77	11.73
1906[11]	326	...	45	...	371	24	15.46	13.58
The World—								
1879	2892	2112	445	2520	7969	643	12.39	4.49
1883	3294	2311	444	1984	8033	757	10.61	4.34
1893	3966	3436	620	2571	10593	1264	8.38	3.14
1903	5686	2268	945	3511	12410	1295	9.56	4.39
1906	6889	2129	1131	4132	14281	1330	10.73	5.18

[1] Inclusive of Asiatic Russia and Asiatic Turkey.
[2] Includes only India, Japan. [3] Includes India, Japan, Philippines, Ceylon only. [4] India, China, Japan and Straits only.
[5] Includes only India, Straits, Japan, China, Siam.
[6] Silver reduced to fixed market value, in part. [7] Includes inflated paper issues Colombia, 700 milns. [8] Algiers only in Africa.
[9] Includes only Cape Colony and Algiers in Africa. [10] Includes only Egypt in Africa.
[11] Includes only Egypt and British South Africa in Africa.
[12] Imperfect returns.
[13] Paper issues not fully reported. [14] Includes 1,000 millions paper Colombia.
Note.—In Australia the notes are always far less than the specie in reserve; this causes a variation in the totals for the world.

The use of paper money is quite accurately reported; yet in the table under consideration the term "uncovered paper" lacks precision. It is the result of a deduction, from the gross amount of paper issues, of the sums of specie held in reserves in banks and public treasuries. It is fair to assume that some of the specie is held against deposits in banks. Nevertheless the data are the best available at present.

The amount of full legal tender silver shows a marked falling off; this is

in part due to the fact that demonetization has led to the conversion of some of these coins into subsidiary pieces, and in part to the reduction in value by the Mint Bureau of the silver stock of silver standard countries to the actual; thus the Hong Kong dollar is worth actually only about 50 cents in exchange, and it is entirely logical to measure the money supply in this manner, since that coin will only purchase say half its face value in commodities, whereas our own silver dollar is maintained by law at 100 cents.

Per contra, the Mint Bureau estimates the greatly depreciated paper issues of Latin-American countries at the face, notwithstanding the fact that in Colombia, for example, a reported issue of $1,000,000,000 of such "money" is officially rated at 100 to 1 of gold. Thus that and other countries, similarly situated, are given an enormous per capita circulation, which is misleading; for this paper is not the value-measure at its nominal or face value.

The following comparisons demonstrate clearly that a part of the increase in the gold stocks is due to perfected statistical methods, since the increment in some years is greater than the supply made available by production. Some of the hoarded gold in India and Egypt is now included also. Furthermore the silver product evidently is not as yet fully accounted for in the monetary sense.

	Gold Supply				Silver Supply			
End of	Stock	Increase	Product	Used in Arts	Stock	Coinage	Product	Used in Arts
1900	4907	66	255	75	3841	185	224	53
1901	5174	267	261	79	3847	139	224	57
1902	5383	209	297	76	3664	194	210	65
1903	5686	303	328	76	3213	212	217	66
1904	5987	301	347	80	3130	176	212	74
1905	6483	496	378	85	3176	173	219	65
1906	6889	406	400	122	3260	155	214	110

Silver coinage, product and use in arts are given at commercial valuation. The reduction in the stock, as explained above, is due to the change in values of the silver used in the Far East. The estimates are probably too low, since the trade movements show that nearly half the annual product goes to the Orient for monetary use.

In the second table a more complete estimate is given, for about September, 1907, hence prior to the great draft of gold from Europe to the United States; the mint estimate for 1906 is used as a basis, and other data are obtained from statements of banks throughout the world and from financial publications and reports. Embracing nearly all countries, this table is the most nearly complete one extant, although in the case of some of the unorganized regions the data are only approximations. Thus German Africa has had a coinage of 5,000,000 rupees silver from Berlin; presumably this is still in use. In the Dutch Indies the Bank of Java reports twenty-four millions of notes, and the Netherlands mint has reported the amount of coin sent there; in many such cases statistics are available to provide a basis.

2.—*The World's Money Supply, 1907 (September.)*

(In Millions of Dollars.)

Countries	Gold	Full Silver	Subsidiary	All Coin	In Reserves	Net Coin	Paper	Effective	Population	Per Capita
Great Britain	523	...	117	640	233	407	339	746	44[1]	$16.91
France	944	347	64	1355	725	630	905	1535	39[3]	39.06
Germany	1054	...	220	1274	251	1023	401*	1424	60[6]	23.49
Russia†	949	...	76	1025	625	400	592	992	118†	8.41
Austria-Hungary	300	...	105	405	288	117	382	499	49[4]	10.10
Italy	220	36	6	262	260	2	417*	419	33[7]	12.40
Spain	85	140	34	259	210	49	299‡	348	18[8]	18.51
Portugal	8	...	33	41	11	30	75‡	105	5[4]	19.44
Belgium	30	15	10	55	23	32	139	171	7[2]	23.75
Netherlands	48	48	5	101	55	46	104	150	5[6]	26.78
Sweden	23	...	8	31	21	10	48	58	5[3]	10.95
Norway	9	...	3	12	8	4	21	25	2[3]	10.87
Denmark	25	...	6	31	24	7	33	40	2[6]	15.39
Switzerland	33	6	6	45	27	18	47	65	3[4]	19.11
Turkey†	35	...	20	55	12	43	6	49	5†	9.80
Greece	1	...	1	2	2	0	38*‡	38	2[4]	15.83
Roumania	17	...	1	18	16	2	56	58	6[5]	8.92
Servia	4	1	2	7	4	3	6	9	2[7]	3.33
Bulgaria	7	1	2	10	8	2	10	12	4[0]	3.00
Finland	5	...	1	6	5	1	18	19	2[8]	5.19
All Europe	4320	594	720	5634	2808	2826	3936	6762	419[1]	$16.14
United States	1483a	568	127	2178	1257	921	2057*	2978	86[4]	$34.43
Canada	74	...	7	81	73	8	136*	144	6[0]	24.00
Mexico	58	53	4	115	76	39	117	156	13[6]	11.11
Central America	3	6	1	10	7	3	5*b	8	4[7]	1.70
West Indies	23	1	6	30	4	26	9	35	3[5]	10.00
North America	1641	628	145	2414	1417	997	2324	3321	114[2]	$29.08
Brazil	30	...	...	30	30	...	357*b	357	16[0]	$22.21
Argentina	132	...	...	132	107	25	228*b	253	5[7]	40.99
Chile	2	...	7	9	2	7	33*b	40	3[2]	12.50
Peru	7	...	3	10	...	10	...	10	4[6]	2.18
Bolivia	...	4	...	4	3	1	4	5	2[0]	2.50
Ecuador	2	...	2	4	2	2	4	6	1[2]	4.61
Colombia	8	...	...	8	8	...	9*b	9	4[5]	2.00
Venezuela	1	1	1	3	1	2	1	3	2[8]	1.06
Guianas	...	...	1	1	1	...	1	1	0[6]	2.00
Paraguay	...	...	...	...	...	...	1	1	0[7]	1.43
Uruguay	16	...	4	20	12	8	14	22	1	22.00
South America	198	5	18	221	166	55	652	707	42[1]	$16.79

* Includes government notes. † European possessions only. ‡ Depreciated paper.
a. After deducting 135 millions for errors in estimates. b. Depreciated paper at reduced values.

The Asiatic dominions of Russia and Turkey are in this table separated from those in Europe, and Hong Kong is included with China, of which the entire population is given. Both Asia and Africa show very small amounts per capita in general, because base-metal coin is used more extensively. Following the mint report some of the hoarded gold in India and Egypt is included *as monetary,* although this is not strictly correct.

Countries	Gold	Full Silver	Subsidiary	All Coin	In Reserves	Net Coin	Paper	Effective	Population	Per Capita
India	337	604	...	941	65	876	146	1022	295[2]	$ 3.46
Ceylon	1	6	...	7	3	4	4	8	3[3]	2.42
Siam	1	25	...	26	3	23	4	27	6[1]	4.42
Straits	4	20	5	29	11	18	11	29	5[4]	5.37
Indo-China	...	12	4	16	6	10	10	20	18[5]	1.09
China c.	...	390	...	390	40	350	20	370	433[6]	.85
Japan	91	...	48	139	79	60	150	210	51[7]	4.06
Korea	1	...	2	3	2	1	5	6	12[9]	.50
Philippines	4	...	16	20	8	12	9	21	7[8]	2.76
Dutch Indies	1	40	40	81	14	67	24	91	35[7]	2.55
Persia	1	3	1	5	2	3	2	5	7[7]	.65
Turkey	15	...	20	35	...	35	...	35	20[9]	1.75
Russia	6	...	2	8	2	6	20	26	28[9]	.93
Other Asia	1	2	2	5	...	5	...	5	6[9]	.73
All Asia	463	1102	140	1705	235	1470	405	1875	931[5]	$ 2.01
Egypt d.	140	...	15	155	8	147	10	157	11[2]	$14.02
Algiers and Tunis	17	3	10	30	12	18	23	41	44[5]	.92
Tripoli	...	...	1	1	...	1	...	1	1[3]	.77
Morocco	1	4	4	9	...	9	...	9	5[9]	1.80
S. African Reps. e.	62	...	20	82	33	49	9	58	7[7]	7.53
German Africa	...	...	1	1	...	1	...	1	12[6]	.08
French Africa	...	2	1	3	1	2	2	4	26[9]	.15
Kongo	...	1	2	3	...	3	...	3	19[9]	.16
British Africa g.	...	1	1	2	1	1	1	2	4[9]	.50
Italian Africa, etc. h.	...	1	...	1	...	1	...	1	0[5]	2.00
Portuguese Africa i.	...	1	1	2	...	2	...	2	6	3.33
Other Africa	...	...	1	1	...	1	...	1	8[5]	.11
All Africa	220	13	57	290	55	235	45	280	146[6]	$ 1.89
Australasia k.	145	...	10	155	130	25	24	49	5[9]	$ 9.80
Other Oceanica	...	...	1	1	...	1	...	1	2[5]	.40
All Oceanica	145	...	11	156	130	26	24	50	7[5]	$ 6.66
The World	6987	2342	1091	10420	4811	5609	7386	12995	1661	$ 7.82

c. Includes Hong-Kong and *all* of China's population. d. Sudan included. e. Cape Colony, Natal, Transvaal, Orange, etc. f. Includes Madagascar, Réunion, etc. g. Mauritius, Zanzibar, West Coast, etc., included. h. Eritria, etc. i. Mozambique included. k. Includes New Zealand.

In giving the paper money the gross issues are stated; coin in reserves being deducted from the total supply. Considerable silver is included in many of the reserves. The paper issues of South and Central America are given in reduced values, as per official fixed rates or the gold premiums.

Europe and the United States together, with less than one-third of the world's population, hold nearly 75% of the total money, and nearly 83% of the gold; the United States possesses more than 21% of the gold, and next to

France shows the largest amount per capita, if the inflation in Argentina is disregarded.

The aggregates recapitulated are as follows:

Gold coin and bullion	$6,987,000,000	
Full legal tender silver	2,342,000,000	
Subsidiary silver coin	1,091,000,000	
		$10,420,000,000
Deduct amounts in reserves, in issue banks and treasuries		4,811,000,000
Leaves in other banks and in circulation		$ 5,609,000,000
Paper issues in use		7,386,000,000
Total		$12,995,000,000

This gives for an estimated population of 1661 millions a per capita of $7.82.

The total is almost the same as the total value of the world's foreign trade, discussed in the chapter upon international exchanges.

The third table presents the note-issues and coin reserves of the principal and other banks of issue of Europe for a series of years, and the ratio of coin to notes of the aggregate. The relative weakness of the "other banks" is due to the small specie holdings in Greece and Portugal, where notes are at a discount, and to the status of the Belgian bank which has a relatively small reserve, yet keeps its paper at par.

Referring to the general table it is to be noted that the Bank of England's gross note-issue is also given, although the net (being the notes actually outside the Bank), is ordinarily used in making comparisons. The figures for 1907, being for a period earlier in the year than those for other years, show relatively stronger position in almost all the institutions; as stated in the chapter discussing the recent disturbance, the note-issues always increase substantially at the end of the year.

It will be observed that the French and Russian banks hold more than one-half the reserve gold of Europe; and that silver continues to be an important factor in the general reserves, even Germany holding a substantial sum. Nevertheless the gold reserves stand very high (50% and over) in the aggregate. It is not unlikely that France may find it judicious at an early day to assist the countries in southern Europe with a sufficient amount of gold to place their paper currencies firmly at par; a comparatively small amount of gold would accomplish this. At the date of the last reports used in the table (September, 1907), the gold premiums were about as follows: Portugal 5%, Spain 15%, Greece 8½%.

The variation in the total paper and the reserves held, as given in this table, from the figures in the preceding table, is due to government note-issues and the reserves held against them.

3.—*Note-Issues and Reserves of the Principal and Other European Banks of Issue at End of Each Year, 1896-1906, and September, 1907.*

(In Millions of Dollars.)

Year	Bank of England			Bank of France			Imp. Bank of Germany			Bank of Russia		
	Notes		Gold	Notes	Gold	Silver	Notes	Gold	Silver	Notes	Gold	Silver
	Gross	Net										
1896	249	129	165	741	369	237	303	125	69	839	463	7
1897	234	137	147	735	377	233	319	129	70	475	598	21
1898	225	132	142	735	352	233	327	123	59	352	512	22
1899	218	138	143	772	361	222	321	111	56	265	439	29
1900	224	144	138	861	450	212	340	116	60	286	366	33
1901	243	146	157	827	473	212	354	139	70	293	352	34
1902	235	143	144	867	486	212	366	138	51	289	363	35
1903	231	139	144	867	456	212	378	142	50	298	373	38
1904	236	136	144	835	513	213	386	161	63	435	448	32
1905	228	142	138	881	555	207	400	143	50	614	379	17
1906	232	142	142	918	525	195	432	118	43	590	456	24
*1907	272	139	189	905	538	187	339	158	49	612	492	33

Year	Austro-Hungarian			Banks of Italy (3)			Bank of Spain			Other Banks of Issue†		
	Notes	Gold	Silver	Notes	Gold	Silver	Notes	Gold	Silver	Notes	Gold	Silver
1896	268	122	51	204	85	15	200	41	49	534	164	68
1897	284	147	50	205	77	13	233	46	50	559	168	68
1898	299	154	50	210	78	15	279	53	38	591	183	67
1899	291	157	42	230	76	14	296	65	71	591	179	66
1900	303	186	48	219	78	13	307	68	80	617	187	62
1901	321	226	55	216	81	15	315	68	83	611	187	66
1902	331	224	60	227	87	15	315	69	95	639	188	70
1903	359	225	59	238	116	23	311	70	92	630	185	65
1904	355	234	60	246	121	20	309	72	96	637	187	59
1905	374	218	59	271	155	22	299	73	110	679	206	60
1906	402	227	57	306	180	25	296	74	118	685	218	56
*1907	382	220	58	330	182	28	299	75	125	686	221	54

Year	All Banks of Issue				Notes not covered by:		Per cent. Reserves	
	Notes	Gold	Silver	Total Specie	Metal	Gold	Metal	Gold
1896	3338	1534	496	2030	1308	1804	60.8	45.9
1897	3044	1689	505	2194	850	1355	72.1	55.5
1898	3018	1597	484	2081	937	1421	68.9	52.9
1899	2984	1544	500	2044	940	1440	68.5	51.7
1900	3157	1589	508	2097	1060	1568	66.4	50.3
1901	3180	1683	535	2218	962	1497	69.7	52.9
1902	3269	1699	538	2237	1032	1570	68.1	51.9
1903	3312	1710	539	2249	1063	1602	67.9	51.6
1904	3429	1880	543	2423	1006	1549	70.6	54.8
1905	3746	1867	525	2392	1354	1879	63.8	49.9
1906	3851	1940	518	2458	1393	1911	63.8	50.3
*1907	3692	2075	534	2609	1083	1617	70.7	56.2

* September. † For list of these see text.

A separate statement for the other banks for 1907, to show their relative strength, follows:

	Notes	Gold	Silver	Specie	% Gold	% Specie
Other German Banks	33	11	4	15	33.3	45.4
Belgium, National	139	19	4	23	13.7	16.6
Bulgaria, National	10	6	2	8	60.0	80.0
Denmark, National	33	24	—	24	72.8	72.8
Finland, Bank of	18	5.5	0.5	6	30.5	33.3
Greece, National	23	0.5	0.5	1	2.2	4.4
Ireland (9)	31	14	2	16	45.1	51.6
Netherlands, Bank of	104	29	26	55	27.9	52.9
Norway, Bank of	21	8	—	8	38.1	38.1
Portugal, Bank of	75	5	6	11	6.6	14.6
Roumania, National	56	16	—	16	28.6	28.6
Scotland (11)	36	25	3	28	69.9	77.7
Servia, National	6	3	1	4	50.0	66.6
Sweden, Royal	48	20	1	21	41.8	43.7
Switzerland (37)	47	25	2	27	53.2	57.4
Turkey, Imperial	6	10	2	12	166.6	200.0
Total	686	221	54	275	32.2	40.1

The variation in reserve ratios of these smaller banks is very marked.

Banking Power of the World.

Banking power is the term used to designate the means available to banks, the capital, surplus and profits, deposits and circulating notes. All these items are liabilities, and in measuring banking power of a country the available cash should be compared therewith. Since gold is now the sole money of final payment, the supply of this form of cash should be used in the endeavor to determine the financial strength of the country.

The data generally used as a basis in compiling statistics of banking power are those of the late M. G. Mulhall, an eminent British statistician. Using his figures as a basis for the foreign banks, and our own from official reports, the Comptroller of the Currency has presented the following comparative table, amounts being given in millions of dollars:

	1890 (Mulhall.)	1906	1907	Increase 1890-1907
United States	5,150	16,462.4	17,824.8	246.1%
Other Countries	10,835	21,952.5	27,034.2	149.5%
The World	15,985	38,414.9	44,859.0	180.6%

This shows a very remarkable increase for the United States; but a critical examination of the statistics indicates that there should be a revision. Thus, Mulhall's estimate, as given, was for 1889, not 1890; for in 1890 our reports show the total to have been 5,911 millions (some banks not reporting). Furthermore Mulhall omitted in 1889 a number of banks of European countries, all of Asia and some of Africa and South America. These banks had

means amounting to fully 1,215 millions. Hence it is entirely safe to say that in 1890 the banking power of the United States was fully 6,000 millions and that of the rest of the world not less than 11,850 millions; thus giving an aggregate for the entire world of 17,850 millions.

The following table furnishes additional data on the subject; and the gold supplies of the respective divisions of the world are also given, to indicate the ratio of yellow metal to the bank liabilities:

The World's Banking Power and Gold Supply, by Grand Divisions.

(In Millions of Dollars.)

	1889 Mulhall	1890			1900			1906		
		Power	Gold	Per cent. Gold	Power	Gold	Per cent. Gold	Power	Gold	Per cent. Gold
Europe	9,735	10,000	2,875	28.75	14,500	3,345	23.07	18,000	4,300	23.88
Asia	....	520	125	24.04	1,100	200	18.18	1,420	350	24.65
Africa	45	145	75	51.80	300	100	33.33	400	155	38.75
United States	5,150	6,000	695	11.57	9,900	1,100	11.11	16,500	1,550	9.33
Other America	385	500	60	12.00	1,200	75	6.25	2,000	270	13.50
Australasia ...	670	685	120	17.52	700	130	18.57	780	145	18.60
Total.....	15,985	17,850	3,950	22.13	27,700	4,950	17.87	39,100	6,770	17.32

Note—Mulhall omits in Europe, Turkey, Greece, Roumania, Servia, Bulgaria and part of France; for Asia he has no data; in Africa he gives only Cape Colony; in United States he gives figures for 1888; for South America only Argentina and Uruguay are mentioned.

The gold supply has in general not kept pace with the increase of bank liabilities; the condition in the United States particularly indicates the extraordinary expansion. The high ratio of gold in Asia and Africa is in a sense misleading; the chief holder of gold in the former is India, where it is supposed that the new régime has brought large sums out of hoards into use; banking is not highly developed; in Africa the holdings of gold in Cape Colony, etc., are out of proportion to the banking facilities. Europe has maintained a fairly level ratio.

It is of course true that the entire gold supply of a country is not usually available as reserve; and if the reserves alone were considered the ratios would be very much lower. Upon the other hand, a country's gold may be regarded as a *potential* reserve, possible of being availed of when emergency arises. Moreover, the banks have always on hand in reserves considerable quantities of notes which are properly to be counted as reducing liabilities.

Manifestly the great credit expansion reached the limit of the gold protective ratio, causing a unique stringency throughout the world, to which the position of the United States contributed most largely.

As has been shown, the banking power of England is not represented merely by the status of its great bank; the other banks have far larger means. The resources of the banks of Scotland and Ireland and those of the savings banks,

must be added to ascertain the primary British power in banking; this gives us a total of 6,350 millions for the United Kingdom; yet its gold stock is considerably less than 10% of that sum, ranging between 500 and 550 millions.

Aggregating the sums represented by banks under British influence already referred to, we reach a total of approximately 14,000 millions; yet the total is less than that of the United States, although greater than the total for any other single country. In potentiality the British banking power exceeds that of the United States, partly because of the greater amount and ramification of Great Britain's trade (shown in the next chapter), and the enormous accumulations of credits throughout the world.

It is also to be noted that British banking power has been of slower, yet steadier and more stable growth than that of the United States. Mulhall gave Great Britain alone about 4,500 millions in 1889; to the United States about 5,100 millions; the increase since that period has been enormous for the latter.

The World's Saving Banks.

The great importance of the work of savings banks, in gathering together the small sums of surplus money of wage-earners, and rendering the aggregate available for business, makes it proper to give the data relating to them space here. The general course of the business is to invest the deposits in securities; in some countries the governments, usually through the post-offices, supervise the business; in almost all the investments are regulated. In some countries ordinary banks also have savings departments.

Representing the thrift of the artisan classes, in general, savings deposits are a fair index of the material condition of a people.

In the accompanying table the data relative to these banks are presented for 1895-6 and 1905-6; for the earlier period they are somewhat inexact, but fairly reflect the situation; for the later period the figures are very nearly accurate.

The countries having governmental supervision are indicated in the table by an *. An examination of the table shows that the greatest degree of thrift exists in Denmark and Switzerland; the indicator being the deposit average per capita of population. The United States show the largest average deposit, but fewer people are actually *saving* in this sense. In Denmark one-half the population appears represented in savings accounts; in Switzerland 40%, and in New Zealand about one-third; whereas the United States shows only about 10½%.

Comparisons indicate a falling off of deposits per average depositor except in the United States and a few other countries; this is partly due to the greater accuracy of the statistics in the later period, but is nevertheless a demonstrated fact; yet the increase in deposits has been remarkable, and the proportion of *depositors* to population has likewise increased, the ratio per inhabitant (last *column)* showing this. The data also indicate that government savings banks,

owing to the smaller rate of interest paid, are upon the whole less popular than the others, when deposits grow larger.

The World's Savings Banks.

(Deposit accounts and deposits, in millions.)

Countries	1895-6				1905-6			
	Accounts	Deposits	Average Deposits	Per Capita†	Accounts	Deposits	Average Deposits	Per Capita†
*Great Britain	8.0	815	$101.87		11.7	997	$ 85.24	$23.06
*France	9.0	830	83.10		12.1	898	74.03	22.88
Germany	6.9	1000	144.93		17.3	2831	163.71	46.66
*Russia	1.8	250	138.29		5.7	533	94.13	3.67
*Austria-Hungary	4.9	850	173.41		7.1	1404	197.74	28.53
*Italy	4.0	325	81.25		6.5	234	35.71	6.96
*Belgium	1.1	113	98.73		2.3	151	65.59	21.19
*Netherlands	0.7	43	61.43		1.6	92	55.55	16.39
*Sweden	1.4	96	68.57		1.9	176	90.60	32.98
Norway	0.5	60	120.00		0.8	100	126.85	43.38
Denmark	1.0	165	165.00		1.3	213	160.98	82.26
Switzerland	1.2	178	148.24		1.3	193	148.46	62.20
Other Europe	0.1	6	60.00		1.1	104	91.27	3.24
All Europe	40.6	4731	$116.28	$15.21	70.7	7926	$112.07	$18.60
United States	5.1	1907	$376.50	$26.68	8.0	3482	$433.79	$41.13
*Canada	0.2	54	270.00		0.3	91	305.00	15.96
*British Colonies	0.1	5	50.00		0.1	9	87.62	4.00
Other America	0.1	1	10.00		0.1	4	41.90	5.50
All America	5.5	1967	$357.57	$25.54	8.5	3586	$421.89	$35.50
*Japan	3.0	29	$ 9.66		12.6	77	$ 6.05	$ 1.57
*India	0.7	31	44.29		1.1	45	40.69	.20
Other Asia	0.1	5	50.00		0.2	8	34.65	.18
All Asia	3.8	65	$ 17.11	$ 2.00	13.9	130	$ 9.34	$ .40
*British Africa	0.1	8	$ 80.00		0.2	23	$109.30	$ 3.71
Other Africa	0.1	3	30.00		0.1	3	39.02	.18
All Africa	0.2	11	$ 55.00	$ 5.50	0.3	26	$ 88.49	$ .97
*Australia	0.8	110	$137.50		1.2	189	$157.50	$46.10
*New Zealand	0.2	23	115.00		0.3	48	150.35	53.52
All Australasia	1.0	133	$133.00	$31.67	1.5	237	$158.16	$47.61
Aggregate	50.1	6807	$136.09	$ 9.40	94.9	11905	$125.45	$13.44
All except U. S.	45.0	4900	108.88	7.50	86.9	8423	96.92	10.53
Postal Banks	18.5‡	1200‡	64.89	1.80	36.3	1905	52.36	2.38
Others	26.5‡	3700‡	139.62	5.70	50.6	6518	128.81	8.15

*Includes Postal Savings Banks. †Of population represented in the table.
‡Data imperfect; partly estimated.

INTERNATIONAL EXCHANGES

THE WORLD'S COMMERCE—COMMODITY PRICES—MECHANISM OF EXCHANGE.

The subject of exchange is of direct importance in connection with that of the money supply, since it is the element entering into the movement of gold from one country to another. In its primary form it is simply the means of payment for a commodity. If a cotton merchant in New Orleans sells to a Lancashire (England) manufacturer a quantity of cotton worth £10,000, he expects the purchaser to pay him $48,666.66 or its equivalent. In a primitive stage the manufacturer would ship the gold in return; but by means of exchange operations the transaction is simplified; exports are "set off" against imports and only the balances are paid for; indeed balances between a number of countries are thus set off against each other, obviating the need of moving gold.

The commodity trade being the basis, the following statistics of the world's foreign commerce are of interest. Obviously the data, although compiled from official reports, are not an absolutely accurate exhibit; since the exports of one country are the imports of another the values should be the same, which would result in a balanced aggregate. But in fact aggregate imports are always higher, due to freights, tariffs and other factors affecting values. Including silver as a commodity, it may be assumed that the world's commerce deals now with $13,000,000,000 in value of goods, which constitute the basis of that amount of "exchange," *i. e.,* drafts.

For the seller or shipper now-a-days generally draws a draft, upon the purchaser or consignee, for the value of the commodities; and in order to avail himself speedily of the sum involved he sells the draft at the current rate, usually somewhat less than its face. In order to secure the purchaser of the draft or *bill of exchange,* there are attached to it "documents," the bill of lading, etc., which constitute a voucher, represent the goods, and must be produced before they are delivered. Thus the exchange is based upon the goods.

Recurring for a moment to the table, the preponderance of Australasia's commerce per capita is noteworthy. The excess of exports, aside from its gold shipments, enables the retention of a very substantial part of the gold product, which renders it possible to maintain a very strong position respecting the character and supply of money. Europe, which ranks next, shows the reverse position: a great preponderance of imports. This is offset by investments of capital in other countries and the annual interest collected therefrom.

The World's Commerce.

(In Millions of Dollars.)

Divisions	Annual Average, 1881-86 (Mulhall.)			1894-95 (U. S. State Dept.)			1905-6 (U. S. Bureau Statistics.)*		
	Imports	Exports	Total	Imports	Exports	Total	Imports	Exports	Total
Great Britain	1955	1455	3410	1987	1332	3319	2750	1605	4355
France	905	670	1575	954	835	1789	922	939	1861
Germany	765	770	1535	995	781	1776	1697	1364	3061
Netherlands	430	330	760	509	454	963	1031	800	1831
Other Europe	1760	1600	3360	1653	1582	3235	2878	2665	5543
All Europe	5815	4825	10640	6098	4984	11082	9278	7373	16651
China	110	95	205	147	112	259	339	168	507
India	258	396	654	206	284	490	339	514	853
Other Asia	120	135	255	379	351	730	682	604	1286
All Asia	488	626	1114	732	747	1479	1360	1286	2646
United States	670	790	1460	655	892	1547	1227	1718	2945
Other America	525	540	1065	687	685	1372	1060	1247	2307
All America	1195	1330	2525	1342	1577	2919	2287	2965	5252
Australasia	305	235	540	218	263	481	249	320	569
Africa	130	140	270	244	254	498	556	356	912
Other	200	240	440	26	20	46	...	...	...
Aggregate	8133	7396	15529	8660	7845	16505	13730	12300	26030

*Making deductions for specie movements where included.

Commerce Per Capita, 1905-6.

	Commerce Million dollars	Population	Per Capita	Imports only	Per Capita
Europe	16,651	415	$40.12	9278	$22.35
Asia	2,646	930	2.84	1360	1.46
America	5,252	158	33.24	2287	14.47
Australasia	569	7	81.28	249	35.57
Africa	912	147	6.20	556	3.78
	26,030	1657	$15.71	13730	$ 8.29

It should finally be stated that comparisons of commercial statistics by years are subject to another condition requiring consideration: the prices of com-

modities, which have varied materially during the past decade. Several estimates of the course of prices are published; the results of the principal ones are given in the next table; being calculated upon different bases, they are not in absolute correspondence, but the general trend is similar.

Index Numbers of Prices.

Years	Sauerbeck, 45 Commodities Average	London Economist 22 Commodities Dec. 31 ‡	United States Official (Labor Bureau from 1890.) 11 foods Average	United States Official (Labor Bureau from 1890.) 19 other Average	Dun's Weighted July 1 †	Mean of the Five
1867–77.....	100	...	...	...	...	...
1874	102	131	104	100	143	116
1879	83	106	88	83	97	91.4
1884	76	96	109	97	100	95.6
1889	72	101	102	92	90	91.4
			30 Foods* Retail.	258 Comm.* Wholesale.		
1890	72	102	102	113	91	96
1891	72	97	103	112	96	96
1892	68	96	102	106	90	92.4
1893	68	95	104	106	91	92.8
1894	63	87	100	96	83	85.8
1895	62	91	98	94	81	85.2
1896	61	89	96	90	74	82
1897	62	86	96	90	72	81.2
1898	64	87	98	93	78	84
1899	68	98	100	102	85	90.6
1900	75	97	101	110	91	94.8
1901	70	89	105	108	92	92.8
1902	69	91	111	113	102	97.2
1903	69	100	111	114	99	98.6
1904	70	97	112	113	97	97.8
1905	72	107	112	116	98	101
1906	77	114	116	122	105	107

* 1890-1900 average 100 as basis.
†For July 1; confined to necessaries of life; weighted according to consumption.
‡Converted into units on basis of average for 1857, 100.

The greater part of the commerce of the world is paid for in the manner indicated, by the drawing of bills of exchange, which are classed as *commercial bills;* a portion is, however, paid for by the remittance of *bankers'* bills. The commercial bills are usually payable at a future date,—say sixty or ninety days with us, much longer periods with other mercantile nations. Bankers discount these, paying the shipper of commodities at once; brokers make it a business to collect them for bankers, and there are regular market prices for them. Thus sterling bills (*i. e.,* payable in £), were quoted on a given date at 4.83¼ for sixty day paper, which was the price bankers were willing to pay for them. (The difference between this price and $4.86 2-3, the parity, represents the discount, or interest for sixty days, the cost of collection, and a slight margin for profit.)

Bankers send these bills to their correspondents abroad for collection, or

for acceptance and discount there, by means of which they establish a credit against which they can then draw their own bills. In many cases these international bankers operate by means of branches. When bankers' credits are insufficient to meet the demand for bankers' bills, borrowing abroad is resorted to or securities are sold abroad. The latter is a very important line of business. In the case of borrowing it is usually contemplated that repayment will be made when the supply of commercial bills is again ample; for since much of our foreign business is in grain and cotton, the movement is naturally more active in certain months.

Bankers' bills are usually payable on demand and bring a higher price than commercial bills; thus upon the day already mentioned, the rate was 4.86⅞, or 3⅝ cents more to the £, than commercial bills. In order to enable one to make *immediate* payments abroad *cable* transfers are available, at a slightly higher price; thus 4.87⅜ was quoted.

By reason of its financial preponderance, London has in a sense become the clearing-house for international transactions, and thus a large portion of the vast sums involved in the international trade is settled there.

Were the debits and credits arising from the commerce of the world the same between individual countries, and were no other conditions present to modify that status, the rate of exchange between these countries would be very near the parity established between the moneys used by them. But not only does it very rarely happen that there is no balance either way in the trade between any two countries, but a number of other elements must be considered in the examination of the movement of the world's exchanges.

Thus in the relations between the United States and Great Britain, as an example, we must bear in mind that many of the debits against the United States in the way of trade are settled for in London, and the rate of exchange is affected only partially by the "balance of trade."

Other elements influencing it are enumerated below:

1. Very considerable sums of money are invested by Europeans, and especially by citizens of Great Britain, in enterprises of almost every description in the United States; not only therefore must the interest upon these be paid, but the principal sum at maturity as well.

2. Not only is money loaned, generally, in the manner already described, but large sums are advanced temporarily—for periods as short as thirty days at times, necessitating additional remittances from time to time, or at least creating additional debits both for interest and principal.

3. Many of the investments thus made are in securities readily salable in open market here; and the use of the cable enables the lenders abroad to sell these evidences of debt in our markets at short notice.

4. Our heterogeneous currency system and the absence of a powerful financial institution to regulate international transactions, make it thus possible for investors in our securities abroad to change a favorable balance to an unfavorable one, at any time when conditions here operate to make them suspicious of the future of their investments.

5. Loans of these several kinds are influenced largely by the prevailing rates of interest or discount; a rise in this particular, other things equal, being almost always the cause of the movement of money to the point where the rate is relatively higher; whereas a fall in the rate would have the contrary effect. (The word relatively is necessary for the reason that interest rates are normally higher in some countries than in others, and it is the change from this usually prevailing rate that affects exchanges.)

In the case of the United States, more than in that of any other country, an element operating extensively is the large number of tourists annually crossing to Europe, whose expenses must be met by the use of the established credits. Moreover, the commerce of the United States is carried almost entirely in foreign ships, and the freight charges therefor accrue to Europeans. Owing to the prevalence of the *ad valorem* system in our tariff laws we also suffer from the undervaluation of merchandise imported (although less now than formerly). Finally, immigrants from Europe send considerable sums annually to their relatives in "the old country"—sums which are scarcely counterbalanced, in the long run, by the money which immigrants bring with them when arriving upon our shores.

Briefly recapitulated the elements are:

1. Investments—Principal and interest payments thereon.
2. Short loans—Repayments plus interest.
3. Speculative purchase and sale of securities.
4. Currency and banking conditions affecting the above.
5. Interest and discount rates.
6. Travelers' credits.
7. Freight, undervaluations, immigrants' transfers.

Estimates of the amounts involved in the "invisible movements" which affect United States exchanges vary; that they have been very large and are still quite appreciable is demonstrated by the exhibit of the results of the visible or trade movement, which is here presented.

Fifteen fiscal years, 1893 to 1907.

Exports of merchandise and silver	Cr. 20,036 millions	
Imports of merchandise and silver	Dr.	13,927 millions
Imports of gold		1,029 millions
Exports of gold	919 millions	
Apparent net balance *to our credit*		5,999 millions

This average annual *credit* of nearly 400 millions has been settled in some way; in part foreigners sold us our securities, of which they held at one time several thousand millions; and thus we own to-day more of our bonds and stocks than ever before. But a very large part was made up of the items enumerated, believed to have been formerly fully 250 millions, because we were then compelled to pay interest upon our securities held abroad; nowadays the chief item is the expenses of our travelers abroad, which are estimated at 150 *millions a year.*

Although only a fraction of the volume of trade is, therefore, paid in gold, the aggregate movement of the metal is nevertheless quite considerable; as is shown in the table on page 111, the United States, in seventeen years, moved 2138 millions, with the net result of only forty millions gain. Including the primary movements from places of production to the "free market" in London, the British returns show imports 821 millions in five recent years, and exports of 728 millions, gaining 93 millions. The average annual movements still aggregate a very considerable sum, which has led to further discussion of the plan to establish an *international clearing-house* to obviate it in part.

Another cognate subject is the agreement upon an international gold unit, which has been discussed from time to time since the conference at Paris in 1867. A 25-franc gold piece has been recommended for this purpose. The variation between it and similar coins of other leading nations is best shown by reducing them to weights of pure metal, thus:

25 francs = 7.258 grammes pure gold worth $4.82 2-5.
Half-eagle = 7.523 grammes pure gold worth $5.00.
Sovereign = 7.322 grammes of pure gold worth $4.86 2-3.
20 marks = 7.168 grammes pure gold worth $4.76 2-5.

In analyzing THE MECHANISM OF EXCHANGE attention must first be given to the relative value of the monetary units in terms of each other; to enable one to determine how many dollars, francs or marks are required to pay for £100, 100 marks, 100 francs, etc. Ordinarily the quotations for exchange, *i. e.*, the rate at which bills can be purchased, are expressed to indicate the number of pieces required to purchase one or more of the units of the country where the payment is to be made. But this is by no means always the case; sterling exchange, for example, is quoted in London as well as in New York in terms expressing the number of dollars to the £.

A table showing the equivalents of the principal coins or units of the world in terms of each other is of interest in this connection:

Table of Equivalents of Principal Coins or Units.

Units	Dollars	Shillings	Francs	Marks	Florins	Kronen	Kronor	Rubles	Rupees	Yen
Dollar	....	4.11	5.18	4.20	2.49	4.49	3.73	1.94	3.08	2.01
£ of 20 sh.....	4.86.6	....	25.22	20.43	12.11	24.02	18.16	9.46	15.00	9.76
Franc*	.19.3	.79	...	.81	.48	.95	.72	.38	.59	.39
Mark	.23.8	.98	1.23	...	.59	1.18	.89	.46	.62	.48
Florin (Dutch)..	.40.2	1.65	2.08	1.69	...	1.98	1.50	.78	1.24	.81
Krone (Austria).	.20.3	.83	1.05	.85	.50	...	.76	.39	.73	.41
Krone (Scand.).	.26.8	1.10	1.39	1.13	.67	1.32	...	.52	.82	.54
Ruble	.51.4	2.11	2.67	2.16	1.28	2.54	1.92	...	1.59	1.03
Rupee	.32.4	1.33	1.68	1.36	.81	1.60	1.21	.63	...	.65
Yen	.49.8	2.05	2.58	2.09	1.24	2.46	1.86	.97	1.54	...

*Same as lira, peseta, drachma, lev, lei, markka, dinar, bolivar and 1-5 peso of South America.

The equivalents are not mathematically accurate, the fractions being partially dropped.

We must next consider whether the shipment is to be made in ***bullion*** or in ***coin***. Assuming that it is desired to pay in London £100,000 or the equivalent thereof in gold. The exact amount which will equal this sum in our own money unit is $486,666.66. But to remit this amount of our own gold coin ordinarily obtainable, will not cancel the obligation, inasmuch as such coin would prove somewhat below the standard weight owing to abrasion in use; and since internationally the ***weight*** of the specie and its fineness are alone considered, it would be necessary to add enough coin to make up the deficiency in weight. If, however, the United States Treasury is selling assay office bars at par, the original sum of gold may be deposited in the Treasury and bullion obtained for exactly that amount, which would discharge the debt in London. On the other hand if British coin is obtainable it would be necessary only to purchase 100,000 sovereigns which would, if only normally abraded, fully discharge the obligation even though not weighing the required number of ounces which would produce £100,000 at the British mint, which is after all the prime consideration.

These elements enter into the fixing of the *gold-point, i. e.*, the point to which exchange must rise before gold can be profitably exported.

The computation would be as follows:

£100,000 @ .25682 oz. per £ = 25,682 oz. .916 2-3 fine = 23,542 oz. fine.
$486,666.66 @ .05375 oz. per $ = 26,158 oz. .900 fine = 23,542 oz. fine.

The value of the ounce fine being in the United States $20.67.2, and in England £4 4s. 11.45d.; the quotation there is however for ***standard*** gold at 77s. 10½d. per ounce.

This is the price at the mint and involves delay awaiting coinage; but inasmuch as the Bank of England purchases all bullion and foreign coin at a slight commission (1½d. per oz. standard or .916 2-3 fine), this difference must also be allowed for in calculating the exact amount to be remitted, except where sovereigns are used.

It should be stated that since 1891 the Treasury of the United States has not sold assay bars at par; having suspended the sale altogether for several years, and then imposed a charge of 1-25 of one per cent., which practically counter-balances the ordinary abrasion on coin that has been in use.

In remitting from London to New York the same considerations govern, except that the Bank of England often has a supply of United States coin which it sells at a fixed price per ounce, raising or lowering the same according to the condition of its reserves. A fairly average price for such coin is £3 16s. 4d.

Exchanges with other countries are governed by practically the same conditions; in Paris, however, the Bank of France at times imposes a direct premium upon gold to be drawn from its coffers, which may be said to hold the only supply.

But the great banks of Europe exercise a more effective deterring power ***over the movement*** of specie, by raising or lowering the rate of discount to

protect their specie reserves. Thus it has sometimes occurred that by increasing its rate the Bank of England has diverted the demand for gold for the United States from London to Paris, where rates remained stationary.

On the other hand, these differences in rates enable persons having payments to make at one point to utilize conditions at another point to remit specie thence instead of from home. Thus if it were found that in Paris £100,000, or its equivalent (2,521,588.94 francs), could, owing to low rates for interest in Paris and high rates in New York, be obtained more readily in the former place, a house having international connections and credits, would cable an order upon Paris to remit francs instead of exporting eagles,—settling with Paris in another manner, if necessary. In this manner credits at one point are continually used to settle debits at another; and such transactions of a triangular nature known as *arbitrages*, occur continually. In fact, a fourth place may in some instances be utilized by shrewd and well-informed exchange dealers;—and the conditions are as frequently *created* by the use of credits, being then in effect loans;—the dealer selling the bills engaging to repay at a future time, when he may feel sure of obtaining exchange at a more profitable figure; thus exports of gold are sometimes postponed and even entirely avoided, by bridging over the period of short supply of commercial bills until the usual period of their natural appearance in the market.

The conditions of exchange between the gold-using countries and those maintaining a silver or a depreciated paper standard, are much more involved, depending as they do upon the price of gold in the units of the respective countries. Thus, if silver fluctuates materially, the rate of exchange between London and Shanghai must follow, otherwise the remitter necessarily hazards a loss. This instability in the exchanges, particularly between England and its important silver-using dependencies in Asia, has given economists in Great Britain occasion for much study in the endeavor to find a means of remedying the evil and eliminating the speculative feature from the trade between the two continents.

As has been stated elsewhere herein, the problem was solved arbitrarily as to British India, not so satisfactorily in the Straits, and not at all in Hong-Kong which must continue to be influenced by Chinese conditions. The latter remain as the sole difficulties in the way of a final solution of the question of the standards.

Exchange rates are, in general, the indicators of international monetary conditions; a short supply of gold at one point, expressed by a rising interest rate, is at once followed by a falling exchange rate; and the reverse is largely the case when the supply of gold is greater than the needs. The place desiring an additional supply simply bids more for the metal; and if other places do not raise their rates, or if the first-named place continues to bid higher, gold is certain to move. In the aim to obtain a shipment to New York from London, the rate for sterling bills of exchange would have to be depressed to a point below the parity between the units sufficiently to cover the expense of the transfer

and the interest on the sum while in transit. This ordinarily amounts to about 2½ cents to the £, so that the rate must fall to about $4.84 to bring gold.

In the following table the actual situation in the four principal money centers on a given day when money was "easy," is presented to illustrate the point:

Interest Rates	*Exchange at*							
	London upon:		Paris upon:		Berlin upon:		New York upon:	
	Par	Quoted	Par	Quoted	Par	Quoted	Par	Quoted
London 2⅞%	..	..	25.22	25.15	20.43	20.38	4.86⅝	4.84½
Paris.....2⅞%	25.22	25.32	..	..	81.	80.95	5.18	5.15⅜
Berlin.....2¾%	20.43	20.54	1.23	1.22⅛	..	..	95.2	94.7
New York.....3¼%	4.86⅝	4.88	5.18	5.15½	95.2	95.7	...	...

New York was obviously endeavoring to draw gold from London, and at the other points cash was also regarded worth more than drafts upon the English center. In fact gold did leave London for New York soon thereafter.

It is to be noted that in New York the quotations were: upon London in dollars to the £, upon Paris in francs to the dollar, upon Berlin in cents for four marks; and in similar terms at those points upon New York; the London-Paris rate is expressed at both places in francs to the £, and the London-Berlin rate in marks to the £. Paris quotes upon Berlin in francs to the mark, while Berlin quotes bills upon Paris in fractions of a mark to the franc.

Fluctuations at one point are usually followed by corresponding or compensatory changes at the others, in order to protect their gold. Thus a fall in the New York rate will be responded to by a decline in the rate in Paris upon London. (A fall meaning that the cash is preferred to drafts or credits.) London, if it desires to prevent an export of gold, increases the price thereof, or raises the discount rate or both. The latter move is usually effective, either causing gold to flow in from other places, or inducing borrowers to pay off their loans or place them elsewhere.

Reference to the data accompanying the chapter on the Panic of 1907 will show how London was able to draw gold from Berlin to help supply New York; Paris also assisted, but voluntarily, as a judicious policy under the circumstances. What actually occurred was that the French took over some £3,000,000 in bills (loans), from London, furnishing gold. The course of exchange at the four points during the period of pressure, is instructive; the moving factor was the premium on currency existing at New York, which was equivalent to an increase in discount rates, and offset the Bank of England's rise in rates.

INTERNATIONAL MONETARY EVENTS

CHRONOLOGY—CONFERENCES—SILVER TO DATE.

International Monetary Chronology.

1786. United States—Establishment of double standard at 15¼ to 1.
Spain—Adopts ratio 16 to 1.
1792. United States—Ratio changed to 15 to 1.
1803. France—Double standard 15½ to 1 established.
1810. Russia—Silver standard introduced, 15 to 1.
1816. Great Britain—Single-gold standard introduced.
Holland—Substitution of ratio 15⅞ for 15½ to 1.
1832. Belgium—Adopts French system.
1834. United States—Substitution of ratio 16.002 for 15 to 1.
1835. India—Adoption of silver standard, ratio 15 to 1.
1837. United States—Ratio of 15.988 to 1 adopted.
1844. Turkey—Adopts double standard, 15.10 to 1.
1847. Holland—Adopts single-silver standard.
1848. Discovery of gold in California.
Spain—Substitutes ratio of 15.77 for 16 to 1.
1850. Switzerland—Introduces French system.
1851. Discovery of gold in Australia.
1853. United States—Reduces fractional silver coin to 14.884 to 1.
1854. Portugal—Substitutes single-gold for single-silver standard.
Spain—Modifies ratio to 15.48 to 1.
1857. Monetary treaty between Austria and Germany (single-silver standard).
1862. Italy—Adopts French system.
1865. Latin Union formed—France, Belgium, Switzerland and Italy.
1867. First International Monetary Conference (international coins) Paris.
1868. Greece—Joins Latin Union.
Spain—Adopts Latin Union system.
Roumania—Adopts Latin Union system.
1871. Germany—Adopts single-gold standard.
Japan—Adopts double standard, ratio 16.17 to 1.
1873. United States—Gold standard adopted; subsidiary coin at ratio 14.953 to 1.
Scandinavian Union formed, gold standard adopted.
Belgium, Holland and France suspend silver coinage on individual account.
1875. Italy suspends silver coinage on individual account.

1875. Holland—Double standard introduced, ratio 15.62 to 1, but no coinage of silver.
1876. United States—Silver commission.
1877. Finland adopts gold standard.
1878. United States—Returns partially to double standard (Bland-Allison law).
Second International Monetary Conference (bi-metallism) Paris.
Latin Union prolonged to 1886.
1879. United States—Resumes specie payments.
Austria-Hungary—Suspends silver coinage.
Germany—Suspends sales of silver begun in 1873.
1881. Third International Monetary Conference (bi-metallism) Paris.
1885. Latin Union prolonged to 1891.
Egypt—Introduces single-gold standard.
1886. Russia—Modifies coinage.
Great Britain—Gold and silver commission.
1889. Witwatersrandt gold fields opened, Africa.
1890. United States—Increases acquisition of silver (Sherman law), repealing Bland law.
Roumania—Adopts gold standard.
China—First opens its mint.
1892. Austria-Hungary—Adopts gold standard.
Fourth International Monetary Conference (bi-metallism) Brussels.
1893. India—Closes mints to free coinage of silver.
United States—Suspension of all acquisition of silver.
1894. Germany—Silver commission.
1895. Chile—Adopts gold standard.
Russia—Preparing for resumption of specie payments.
1896. Costa Rica—Adopts gold standard.
1897. Russia—Adopts gold standard reducing unit one-third.
Japan—Adopts gold standard reducing unit one-half.
Peru—Suspends silver coinage.
1898. Ecuador—Limits tender of all silver coins.
1899. India—Gold-standard-silver-currency adopted.
1900. United States—Final gold-standard law.
Porto Rico—United States system introduced.
Hawaii—Same.
Ecuador—Adopts gold standard. (Not effective.)
1901. Santo Domingo—Adopts gold standard; United States system.
1902. Siam—Enacts gold-standard-silver-currency law.
1903. Colombia—Adopts gold standard.
Philippines—Gold-standard-silver-currency law.
Straits Settlements—Same.
1904. Panama—Gold standard adopted.
1905. Mexico—Gold-standard-silver-currency law.
1906. Philippines—Reduction in fineness of silver decreed.

INTERNATIONAL MONETARY CONFERENCES.

Conferences have frequently been held between nations to determine upon measures of greater uniformity in relation to monetary matters. The conference of 1865, which led to the formation of the Latin Union, and that of 1873, which resulted in the Scandinavian Union, are among the less important, because participated in by few nations only.

But in 1867 France invited all nations to confer in Paris upon the subject of the modification of coinage for the promotion of commerce and the facilitation of international exchanges.

The conference declared itself, in principle, in favor of the unity of the gold standard, while considering it advisable to temporarily continue the double standard in those countries accustomed thereto, and recommended an international coin equal to twenty-five francs. While the conference had no power to bind, by its action, any of the States represented, its declaration probably influenced those which from 1871 to 1873 proceeded to carry out a programme in harmony with that declaration. This conference unquestionably gave the French system of coinage and the metrical system of weights and measures an important standing in the world.

The demonetization of silver by a number of nations in 1871 and following years, and the marked increase in its production, led to conferences for the purpose of discussing the advisability of remonetization, particularly since the production of gold was then steadily diminishing, menacing the supply of reserve money.

The first of these conferences was called in 1878 by the United States and France; the meeting was held in Paris and most of the leading nations were represented. After very thorough discussion the conference failed to agree, Great Britain and Germany leading in the opposition to an international agreement to use both gold and silver upon equal terms and at a fixed ratio; that is to say, the adoption of bimetalism.

A second conference on the subject met in Paris in 1881, with substantially the same result. In 1886 Great Britain caused an exhaustive investigation of the question to be made, particularly because of her interests in India and the Far East, where silver was the sole currency. The report of her commission was not conclusive, one-half of the members favoring bi-metalism, the other half opposing.

Nevertheless agitation of the subject continued and another conference met in Brussels in 1892; it separated, however, as had the previous ones, without an agreement. The subject then became a distinct, and paramount issue in the political field in the United States. The large increase in the gold production, particularly after 1892, helped to determine the question against silver.

The list of events in the world's monetary history furnishes a succinct view of the conflict of opinion which finally led to the cessation of the free coinage of silver by most of the countries of the world. The fall in price of silver, and more particularly the great fluctuations in price, furnished a

strong argument against the suitability of silver for full legal-tender money purposes. The most potent argument upon the other side, that the supply of money was diminishing because the gold production was falling off, was rendered ineffective by the marked increase in the output of the mines of the world. Such an addition to the supply of basic money as has been made available could not fail to cause a revolution in conditions upon which prosperity depended.

The year 1896, when the people of the United States voted against silver, may be regarded as the date when the tide turned. There were then a number of problems still to be solved; the United States, Germany, France and the other nations which had pursued her policy, had large stocks of full legal-tender silver coin which it was necessary to maintain at parity; this was accomplished by increasing the gold reserves. Russia and Japan, similarly situated, had solved the problem by reducing the value of their money units, when they adopted the gold standard. Several minor states also made adjustments.

The Silver Question to Date.

There remained, however, the single-silver standard countries of Asia and Mexico, which at the time included fully one-half the population of the globe; and although their commerce amounted to less than 12% of the world's aggregate, the instability of silver operated to disturb exchanges to a degree that made commercial transactions speculative. It was deemed imperative to adopt plans to remedy this state of affairs; to liberate the money of these countries from the influence of the bullion market. Obviously if silver was allowed free entry into these countries and was usable as money, the evil would continue. The general device recommended was, therefore, the restriction of the importation and exportation of silver, limitation of the coinage, the establishment of a fixed parity for the local coins and of a gold redemption fund through which these coins could be exchanged for gold or its equivalent at the will of the holder.

As to India, where the British Government had in 1893 suspended the coinage of rupees for individuals, there was adopted in 1899 a plan including the gold standard, with the £ as the unit; fixing the value of the rupee at one-fifteenth thereof (16 pence); providing a redemption fund by means of a government note-issue, through which gold could be had for rupees or rupees for gold. Thus the money of the people was not disturbed and the internal commercial relations continued substantially as before. The foreign exchanges speedily adjusted themselves to the new parity, and it was easily maintained, since the trade balance is continuously favorable. Moreover, the arbitrary ratio thus established was 21.9 to 1, making 508.6 grains of pure silver equal to $1 gold; which effectually prevents exports of silver.

The Philippine Islands, acquired by the United States, although having a local coinage, were like almost all the Far East using the Mexican peso and, in less degree, the British silver dollar. The problem here was to supersede a coin which had for centuries been the accepted medium. It was determined, how-

ever, to introduce a distinct coinage of new design, with a *peso filipino* to be of 416 grains of silver .900 fine, and to have a fixed value of fifty cents United States gold; the coinage was limited and was of course for government account only; and presently the importation of other silver coins was prohibited —they were practically outlawed, as the new coins only were receivable for payments. A gold redemption fund for the free exchange of the coins was established.

This action fixed the ratio at 32¼ to 1, making 748.8 grains of pure silver equal to $1 gold. The turn of events,—probably the opening up of China as much as anything else—caused the price of silver to rise; a point was reached when $1 gold was equal to only 685.7 grains of silver; and since the trade balance of the islands was unfavorable, gold dollars (or the equivalent) were sent to Manila to get the larger quantity of silver in its coins; it looked as if the islands were to be denuded of all their silver money; hence a stringent law prohibiting the export of silver was adopted and eventually it was ordered that the coins be reduced in fineness to .700, which would be equivalent to a declaration that 482.4 grains of pure silver equals $1 gold.

The Straits Settlements next took up the reform. Here the British dollar and the Mexican *peso* circulated, the former dominating. It was determined to recoin the silver in the country, prohibiting further imports and exports, establish a redemption fund and fix an arbitrary par. But the last-named step was delayed; active speculation followed and the commercial conditions were violently disturbed. It was not until January, 1906, that the government finally declared the parity at 28 pence; but evil had been done, and it is doubtful if the conditions are yet restored to a reasonable equilibrium. This parity adopted a ratio of nearly 28.4 to 1; since the Straits dollar (like the old British and the peso filipino) contained 416 grains of silver .900 fine, which would make say 659 grains of pure silver equal $1 gold. The dollar has since been reduced in weight to 312 grains.

French Indo-China undertook no radical change in its system, which is similar to the others; but outlawed the Mexican peso, and prohibited the export of silver bullion and of the local coins, which alone were to have legal-tender functions henceforth.

Siam, which had a heterogeneous system, in which cowrie shells were used for smallest change, concluded to get into line. For practical purposes the old system was represented by the *tical,* equal to three-fifths of a Mexican *peso.* The reform of 1902-3 decreed the gold-standard, restricted silver coinage and imports, and provided for a redemption fund; also recoinage of local coins into ticals of 208.34 grains of fine silver. A fixed parity was not at once reached; the latest news is that the value of the tical is rising and is now nearly 33 1-3 cents. This would give the equivalent of 625 grains of pure silver to the dollar; apparently a safe margin.

China (and Hong-Kong, the great British *entrepôt* at its doors) made no change. Mexican pesos, British dollars, taels (slugs of silver), circulate, side by side with a divisional coinage. Since the suspension of the coinage of

pesos in Mexico, the supply of these pieces is of course diminishing; but here is the world's great dumping ground for silver, and the money medium fluctuates with the price of the white metal. It is a grave question for China, but there has been little disposition shown to adopt measures such as have been made use of elsewhere. During 1906 taels showed a fluctuation of over thirty points, the Haikwan from $.776 to $.808; pesos ranged from $.505 to $.526. As stated elsewhere, an attempt is being made to adopt a single tael as a general unit and standard.

Mexico, one of the world's chief producers of silver, adopted the gold standard in 1905; the coinage of the ancient *peso* was abrogated and the importation prohibited; the existing coins at home were to be recoined into pieces with new designs and the coinage limited; these coins were to be redeemable in gold through a redemption fund; but the obligation to give silver for gold is to be suspended when the parity is disturbed. The gold peso is equal to 49.8 cents in United States gold; the new silver peso, legal-tender as fully as before, weighs 417.8 grains at .902.7 fine=377.18 grains pure silver; the same as the old one. Smaller coins are only .800 fine. The ratio adopted is nearly 32½ to 1, giving the equivalent 757.4 grains pure silver=$1. gold. Nevertheless the measures taken, and the fact that Mexico's silver product is large, will preserve her domestic coin from exportation. By selling old pesos and bullion, quite a substantial gold fund has been acquired.

It is noteworthy that the great increase in the gold product, and the consequent rise in general prices, has caused bi-metallists to manifest a hope for the restoration of silver as a full money metal. Arguments are already being published in the leading European countries, and the "battle of the standards" may be resumed within a decade. It is hence appropriate to re-state briefly the main points of contention between the two groups of advocates.

The bi-metallists assert that not only is the supply of gold inadequate, and should be supplemented by silver to furnish a broader credit basis for commerce, but that the variations in value of gold as indicated by the fluctuation in prices, is much greater than would be the case if silver also were permitted to be used universally, as full money metal, upon equal conditions of free and unlimited coinage at an agreed ratio. Demand could then be shifted, when gold became relatively scarce at a given point, thus preventing the extreme fluctuations.

Their opponents contend that the concept of *two standards* is illogical; that silver is likely to be produced in such quantities that no ratio that could be agreed upon would be maintainable for even a short period of years; for the fluctuations would prove sufficiently great to cause the same disturbances in the value measures which the world experienced heretofore; that the production of gold is quite certain to go on increasing in the long run, and provide adequate metallic basis for the world's credit instruments, if not inordinately expanded.

THE PANIC OF 1907

CAUSES OF THE DISTURBANCE—INTERNATIONAL INFLUENCE —POSITION OF THE GREAT BANKS.

The credit disturbance of 1907 was due to a number of circumstances, which combined to undermine confidence in certain banking institutions in certain localities, particularly New York City. For, while the paralyzing effects following it were more widespread, the actual panic conditions did not prevail generally. The chief element was unquestionably the relatively enormous expansion of credits already referred to, through which the gold reserve basis had been weakened; for if this condition had not existed, the other elements would not have existed, or would have been so much less influential that they would not necessarily have precipitated a panic.

Yet it is proper to note the other elements. From the period of greatest depression in prices and business in 1897, a reaction began, largely stimulated by the increased gold production; an era of combinations of railway and industrial corporations followed, with an enormous increase in security issues, which could not all be readily marketed, partly, no doubt, because issued to a very considerable extent upon prospective or intangible values.

Meanwhile there was an unprecedented accretion of *real* wealth through productive activity. The addition of gold to the supply of money, and the destruction of a very considerable part of the wealth product by wars and other disasters, caused prices to rise very materially. These conditions were, so to speak, universal, as the price table (*ante*) shows.

With us these conditions, coupled with a very defective currency system, brought about undue expansion, as has been shown. General business was stimulated; speculation, aided by the great concentration of means at centers, to which attention has already been directed, was largely over-stimulated. The concentration enabled those who undertook to place the great increment of security issues to "finance" them; and many questionable enterprises of this character were duly "floated," not always in accordance with correct principles. Men obtained control of bank deposits to enable them to carry on these operations, and many unsafe "investments" were made.

Coincidently a quasi-political movement, instigated by the national government, and followed up in many of the states, directed attention to the questionable features in the methods employed in many instances, in effecting the combinations and flotations; and in numerous cases the progress of such undertakings was halted. Entirely proper and legitimate enterprises suffered equally with those subject to criticism. Public opinion, advised of the fact that *some*

banking institutions were largely involved in the latter class of schemes, began to manifest distrust of others as well. The published facts served to place all corporate management under suspicion; and this grew into distinct apprehension when it became more specific.

It must be stated to the credit of the foresight of many of the bankers in New York City, that they began, a year before, to influence a contractive movement in the speculative field. A glance at the figures in the table showing operations of New York City national banks and clearing-house transactions (*ante*) will show this; with the result that share sales diminished and there followed a marked shrinkage in security prices, from the inflated points which they had reached in 1906. Average prices of 60 railway shares showed as follows:

	High.	Low.	Mean.	Fluctuation.
1906.....	$120.99	$109.83	$115.41	$11.16
1907.....	112.25	76.35	94.30	35.90

The conservatism of many bankers could not, however, control all of them; the contraction, and restriction of further expansion, were not sufficiently general. Then again there were too many cases where the expansion period had brought into the assets of some of the institutions, securities which could not be realized upon, which would have shrunken in value by liquidation, which, in short, had to be "nursed." These were the truly weak cases, due to bad banking methods, permitted by negligent directors, in a number of instances accompanied by clear violations of law.

The Situation in New York City.

With the first indications of apprehension, the interior banks, then (October) laboring under the pressure for cash to move a bountiful crop, called for additional funds from their reserves in the metropolis; the local trust companies, inadequately provided with reserves, as already shown, also fell back upon the banks; and borrowers were anxious not to have their loans curtailed. Thus beset upon all sides, and several of their membership being also weakened, the Associated Banks of New York City proceeded to take measures for general protection, under the leadership of the most prominent, capable and resourceful of the private bankers.

The Treasury was called upon, and the Secretary responded with all the assistance he could possibly give by way of cash deposits in banks; the deposits in New York were increased 45 millions and at other points 37 millions, of which latter sum the country banks received one-third. Europe was appealed to also, and despite the obstacles put in the way, fully 100 millions of gold was brought over, of which the major part came to New York banks. Some gold came from Canada and Mexico, also. Interior banks imported about 15 millions.

The local withdrawals of cash from banks and trust companies, although not as general as in the disturbance of 1893, were sufficient prior to the 26th of October to justify the banks in suspending cash payments and resort to clear-

ing-house certificates, for their cash supplies were rapidly going. Money in any form soon commanded a premium in exchange for certified checks, the rate rising to 4%. This naturally stimulated withdrawals where it was still possible to obtain cash; two of the trust companies appeared to have been selected as the centers of attack, and these were kept abundantly provided with means. The currency premium also stimulated gold imports.

Ten banking institutions were compelled to close their doors, and as many more were seriously menaced; but the most important of these were given assistance as soon as they had removed the personal elements in their management which had rendered their condition precarious by speculative investments. Yet several of these succumbed later on.

A suspension of cash payments is manifestly a confession of temporary insolvency under strict interpretation of law; but in cases where a general crash can be avoided by temporary suspension, the general welfare warrants the adoption of the course which involves the lesser evil.

To illustrate the operations of the New York clearing-house banks the following comparisons from their statements will be useful:

	Oct. 19	Nov. 23	Increase	Decrease
Loans	1077 millions	1186 millions	109	..
Cash reserves	267 millions	216 millions	...	51
Surplus or deficit in reserve	+ 11 millions	— 54 millions	...	65
Deposits	1026 millions	1080 millions	54	..
Government deposits	34 millions	69 millions	35	..
Circulation out	52 millions	59 millions	7	..
Call money rates	2½–10%	3½–15%		

By means of the clearing-house certificates they were enabled to increase the loans, instead of demanding payment; such demands would inevitably have aggravated the evil and precipitated serious disasters. The loans were expanded for three distinct purposes: to finance the importation of gold, to enable the furnishing of cash to interior banks; to relieve interior banks of loans (probably speculative), in the center, which they were anxious to get rid of; and to enable the security market to have some means to check the ruinous fall in prices, particularly of bonds, which had set in. By supplying loans at reasonable rates the fall was restricted.

It is important to give the last-named purpose fair consideration. In times of stress, when cash is in great demand, securities must be sold by many individuals and corporations, not merely by speculators. Savings banks, for example, whose assets are so largely invested in bonds, must obtain means to pay depositors. In order to be able to sell securities there must be buyers; in other words, there must be a market. But unless those who make it a business to buy bonds can obtain loans at reasonable rates, wherewith to carry over their purchases, they are unable to buy and the market prices fall. Those who are forced to sell in such circumstances, do so at great sacrifice. But if loans are made upon reasonable terms, buyers will appear and prices are sustained; thus depreciation is limited.

The loss of 51 millions of cash to November 23, when their reserves were lowest, only partly represents the actual payments; to this must be added the increase of cash from the government, their note issues and the gold actually received in the interval, giving a total of fully 120 millions. Of this sum 84 millions were shipped to the interior. But the difficulties continued to the end of the year; it was not until January 11, 1908, that the banks were enabled to show a surplus of cash reserves.

The accompanying tables I and II reflect the conditions week by week.

To relieve the resulting stringency there were issued in most cities various forms of makeshift currency, amounting probably to 250 millions; the New York banks alone issued 100 millions of clearing-house certificates. This "currency" was being rapidly retired at the end of December and beginning of January.

These forms of money were probably subject to the federal tax of 10%; but, as in 1893, no attempt was made to exact this tribute. The people were compelled to help themselves to means to carry on their business, in the absence of laws providing them therewith. The imposition of the tax would, therefore, have been oppressive, and inconsistent with wise public policy.

To show that the pressure was particularly focused upon banks in cities, the following abstract from the returns of national banks is presented; the figures show the changes between the return for August 22 and that for December 3, in 1907, in millions:

	New York	Other Reserve Cities	Country	All
Reserve cash	decr. 42	decr. 45	incr. 46	decr. 41
Deposits	incr. 53	decr. 84	decr. 111	decr. 142
Loans and overdrafts	incr. 64	decr. 73	decr. 77	decr. 86
Circulation	incr. 15	incr. 21	incr. 14	incr. 50
Clearing-house certificates used	34	39	5	78

Eight states and 13 reserve cities report no clearing-house certificate issues.

It thus appears that country banks fortified themselves in cash reserves, largely at the expense of city banks, and had relatively less reason, as it turned out, for the apprehension; the decrease in their loans was probably not in local borrowings, but in those made in the centers; and the falling off of deposits was in large part due to this contraction of loans; actual withdrawals were not very large.

In addition to the disbursement of nearly all of its cash balance, the Treasury also offered to sell 50 millions of Panama Canal Construction 2% bonds, and 100 millions of 3% certificates authorized by a law passed in 1898 (during the Spanish War), which law was unrepealed. The authority to issue these securities was questioned, since the laws contemplated actual government needs therefor; it was however construed that, since the Treasury balance was phenomenally low, the need existed. Obviously, however, if any one, except a hoarder of money, purchased the bonds the general supply of cash would be

lowered by the amount going into the Treasury, thus aggravating the evil. Upon the other hand, such bonds could hardly prove attractive to holders of cash while the premium lasted. In fact, however, the Treasury proposed that the bonds be used to secure public money deposits and note-issues; and actually the bulk of the proceeds was left with the banks, who alone, with negligible exceptions, were allotted securities. In all only about 25 millions of the Panama issue and 15 millions of the certificates, were allotted. The action had a distinctly favorable sentimental influence, which was eminently valuable in the crisis.

I.—Movement of Money at New York, 1907-8.

(Amounts in millions.)

Week of	Associated Banks						Interest Rates		Exchange on London Par 4.86⅔	Premium on Currency	Cash Shipped West
	Deposits	Loans	Reserve Cash	Reserve Short— Over+ *	Notes Out	U. S. Deposits	On Call Loans	Mercantile			
Oct. 19.....	1026	1077	267	+ 11	52	34	2½– 10%	7%	4.86		4
Oct. 26.....	1024	1088	254	— 1	51	48	5 –125	8–10	.82		15
Nov. 2.....	1052	1148	224	— 39‡	52	70	3 – 75	8–10	.80–88	2 –3 %	18
Nov. 9.....	1087	1187	220	— 52	53	73	4 – 25	8–10	.89–84	3½–2	13
Nov. 16	1089	1192	219	— 54	56	72	5 – 15	8–10	.84–88	2½–4	22
Nov. 23. ...	1080	1186	216	— 54	59	69	3½– 15	8–10	.88–85	3 –1½	16
Nov. 30.....	1083	1198	218	— 53	62	72	3 – 12	8–10	.87–86	1½– [illegible]	11
Dec. 7.....	1075	1186	222	— 46	66	75	3 – 13	8–10	.87–86	2 – [illegible]	12
Dec. 14.....	1067	1175	227	— 40	69	77	2 – 25	8–10	.86–85	1 – [illegible]	6
Dec. 21.....	1059	1165	233	— 32	71	79	17– 3	7– 9	.87–86	1½– [illegible]	5
Dec. 28.....	1051	1148	243	— 20	72	79	6 – 25	7–10	.86–85	½– [illegible]	3
Jan. 4.....	1048	1133	247	— 12	72	76	22– 10	7–10	.85	....	† 5
Jan. 11.....	1052	1117	269	+ 6	72	73	10– 5½	7– 8	.86	....	† 9
Jan. 18.....	1090	1127	295	+ 23	71	72	6– 3	6– 7	.87	....	† 9

Deposits include U. S. deposits. Loans include bonds, etc. *Reserve is 25% of deposits; when under the requirement the cash is "short."
†Net received from West, etc. ‡Clearing-house certificates issued first in this week.

The status of the New York City banks and the results, are clearly shown in the tables. In the week ending November 2 the banks parted with 30 millions of cash, in addition to 22 millions received from the Treasury; of this 52 millions 18 went to out-of-town banks; most of the rest to local trust companies. Loans were expanded 60 millions, deposits only 28 millions, showing further assistance rendered to other institutions; 30 millions of gold were engaged abroad; for despite the rise in discount rates there, our currency premium enabled imports when the rate of exchange stood far above the "gold point," to which figure it had gone in response to London's 7% rate (see table III). Subsequent weeks showed merely a repetition, in greater or less degree, of similar events, until the end of December.

It is to be noted that not only the rate for call loans, but also that for commercial discounts, was affected; for a period the rates for the latter class were merely nominal,—no money was available for that purpose. Share prices fell,

and therewith the volume of stock trading and of bank clearings declined. The status of interior points is partially reflected by the rates for exchange upon New York at the two other chief reserve centers, and by the clearings outside New York.

The operations of the Treasury are significant; never before was there such an outpouring of its funds and depletion of its available balance. The extent to which it could possibly assist, as central banks do elsewhere, is shown. Yet it is to be borne in mind that, at its lowest, the *gross* balance held was over 100 millions; for the Treasury keeps dollar for dollar against its current liabilities, and reports as net balance the difference. The power to accept bonds other than government issues for public deposits, served to aid materially in increasing these, and in releasing government bonds to be used to secure bank-note issues. Yet all these resources failed to stay the panic speedily.

II.—Movement of Money, 1907, United States Generally.

(Amounts in millions.)

Week of	The Treasury: Gross Balance * Cash	The Treasury: Gross Balance * Banks	The Treasury: Net Balance	The Treasury: Available	Banks Gain + Loss −	Note Issues	Gold Imports	Exchange on New York at: Chicago	Exchange on New York at: St. Louis	Clearings in Millions: N. Y.	Clearings in Millions: Other	Average Price of 60 R. R. Shares
Oct. 19..	145	182	237	55		..	..	5c dis.	25c prem.	1815	1290	84.0
Oct. 26..	134	199	236	37	+17	..	..	50c–$1 dis.	20c prem.	2104	1281	82.0
Nov. 2..	104	225	237	12	+26	55	..	$1–$3 dis.	15c prem.	1659	1168	79.7
Nov. 9..	101	230	240	10	+ 5	8	8	45c prem.	$4.00 prem.	1272†	1021†	79.2
Nov. 16.	97	232	239	7	+ 2	11	22	50c prem.	$7.00 prem.	1320	1017	78.5
Nov. 23.	98	229	237	8	− 3	11	15	$1 prem.	$7.00 prem.	1261	962	77.7
Nov. 30.	101	237	242	5	+ 8	12	17	$2 prem.	$4.00 prem.	1055†	799†	77.7
Dec. 7..	102	244	250	6	+ 7	11	14	Par.	$4.00 prem.	1434	1021	80.3
Dec. 14.	111	247	258	11	+ 3	11	10	Par.	$5.50 prem.	1305	967	79.9
Dec. 21.	107	258	267	9	+11	9	7	50c dis.	$3.50 prem.	1231	974	79.5
Dec. 28.	112	264	268	4	+ 6	3	4	10c prem.	$3.00 prem.	984†	799†	79.7
Jan. 4..	105	261	270	9	− 3	3	5	Par.	$1.00 prem.	1335†	965†	80.0
Jan. 11.	103	258	267	9	− 3	2	4	20c dis.	75c prem.	1397	1032	82.0
Jan. 18.	101	257	264	7	− 1	3	1	40c prem.	50c prem.	1770	1041	85.0

The *net* Treasury balance is after allowing for current liabilities, to the full amount.
* Excluding gold reserve.
† Five days only, a holiday intervening.

International Influence of the Panic.

Tables are also presented to show the effect of New York's pressure upon foreign money markets (III., IV., V.), week by week.

The London exhibit shows how the Bank of England struggled to preserve its store of yellow metal, both by raising the price for gold and by increasing its interest rate. The result was not to stop the flow to New York, where the higher bid due to the premium out-balanced these measures, but to bring gold from other points; first from Berlin, where similar measures were ineffectual

to hold gold, and finally from Paris, which extended aid voluntarily, as a matter of good business policy, to a limited extent only, however. Thereafter Berlin again had to give up to London. By January 11 the Bank of England had as much gold as on October 19.

INTERNATIONAL MOVEMENT OF MONEY, OCTOBER, 1907, TO JANUARY, 1908.—CONDITION OF BANKS, DISCOUNT AND EXCHANGE RATES, ETC., LONDON, BERLIN, PARIS.

(Amounts in millions of dollars.)

III.—London.

Week of	Deposits	Bank of England							Gold		
		Loans	Securities	Notes Out	Gold	Reserve * Amount	Reserve * Per cent.	Discount Rate	Price of Bars Par 77s. 9½d.	To N. Y.	Bank's Loss— Gain+
Oct. 19.....	235	134	205	143	169	114	49.3	4½%	77.10⅝		
Oct. 26.....	247	145	217	142	169	117	47.2	4½	10¼		
Nov. 2.....	253	169	239	143	154	101	39.8	5½	78.	16	— 15
Nov. 9.....	244	176	245	144	140	86	35.2	6-7	0½	25	— 14
Nov. 16.....	253	168	238	142	155	102	40.5	7	77.11½	10	+ 15
Nov. 23.....	249	170	240	142	149	96	38.7	7	11⅜	14	— 6
Nov. 30.....	247	158	229	141	156	106	42.8	7	11	4	++ 7
Dec. 7.....	243	154	223	143	159	106	43.8	7	11½	6	++ 3
Dec. 14.....	245	147	217	141	166	114	47.0	7	10¾	8	++ 7
Dec. 21.....	237	145	216	142	160	109	45.9	7	11¾	7	— 6
Dec. 28.....	239	160	232	144	149	95	40.0	7	10	4	— 11
Jan. 4.....	293	199	276	144	157	104	35.6	6	09½	3	++ 8
Jan. 11.....	245	136	216	141	169	118	48.1	6	09⅜	1	++ 12
Jan. 18.....	238	131	201	138	174	126	52.7	5	09		+ 5

*Reserve is balance of gold after covering notes not covered by bonds and % is to deposits.

Note—The Bank's statement is published on Thursday, hence two days earlier than dates named, which are the New York statement dates.

It was in Berlin that the struggle was most violent. While accurate data as to gold are lacking, owing to the Imperial Bank's secretive policy respecting its silver balance, the losses of cash were substantially all in gold; silver was not available and the notes held in the cash were used locally. It was compelled to curtail loans more extensively than was the case with the British institution, and the cost of the emergency to its public was probably greater, as it raised the discount rate to 7½%

The device of issuing taxed notes does not appear to have been utilizable at the height of the pressure; the amount of this currency was lowest on the 23d of November. Yet the exhibit of this feature is interesting, particularly with respect to the great expansion at the end of the year, when all the European banks increase note-issues to assist in financing the end-year settlements. By the 7th of January the Bank had restored its gold reserve nearly to the figure reported on October 19.

Paris furnishes the most remarkable showing: relative placidity in the face of the surrounding disturbances; interest rates going no higher than 4%; the Bank preserving its gold against all assaults until the moment arrived when it

was deemed wise to let some of it go for the common good, by taking over from London some 16 millions of first-class negotiable paper, upon which there is an accruing profit. Unquestionably the French system served the people much more efficiently than any other, owing to its superiority in design and operation. The commercial interests of France suffered less disturbance and were subjected to a smaller tax by way of interest charges.

IV.—Berlin.

Week of	Imperial Bank of Germany									Exchange on	
	Deposits	Loans	Securities	Notes Out	Gold *	Other Cash *	Per Cent Cash †	Taxed Notes ‡	Discount Rate	London Par 20.54	Paris Par 81,00
Oct. 19	138	321	35	380	133	79	40.9	56	5½%	20.49	81.50
Oct. 26	143	309	25	366	141	82	43.8	31	5½	.52½	.55
Nov. 2	131	338	23	385	130	73	39.3	69	6½	.54	.60
Nov. 9	134	330	22	372	122	78	39.5	60	7½	.58½	.55
Nov. 16	131	319	18	357	123	79	41.4	42	7½	.58½	.35
Nov. 23	129	310	10	343	124	80	43.2	26	7½	.58	.35
Nov. 30	116	330	13	360	113	72	39.7	62	7½	.53½	.45
Dec. 7	113	315	12	349	114	73	40.5	48	7½	.52½	.40
Dec. 14	129	320	18	351	117	75	40.5	46	7½	.54½	.40
Dec. 21	...	...	..	...	...	..	...	..	7½	.54	.35
Dec. 28a	134	341	17	373	120	76	38.6	64	7½	.52	.40
Jan. 4b	157	442	29	449	118	69	30.9	149	7½	.49½	.45
Jan. 11c	125	351	31	408	132	72	39.0	87	6½	.50½	.45
Jan. 18d	136	302	26	366	146	80	45.1	28	6½	.49½	.40

a. Dec. 23. b. Dec. 31. c. Jan. 7. d. Jan. 15.

* The Bank states its gold holdings officially only on Dec. 31,—the figures are close estimates. Other cash consists of silver, Treasury and bank-notes. † To notes and deposits. ‡ Untaxed credit notes fixed at 112½ millions.

V.—Paris.

Week of	Bank of France							Exchange on London Par 25,22	Gold Loss— Gain+
	Deposits	Loans	Notes Out	Gold	Silver	Per cent. Gold *	Discount Rate		
Oct. 19	137	335	943	534	181	49.4	3½%	25.13	
Oct. 26	139	322	932	537	181	50.1	3½	.12½	+ 3
Nov. 2	155	385	965	538	181	48.0	3½	.16½	+ 1
Nov. 9	142	350	959	531	180	48.3	4	.25	+ 7
Nov. 16	150	355	943	522	180	47.9	4	.28	+ 9
Nov. 23	148	339	930	523	180	48.5	4	.27	+ 1
Nov. 30	174	359	930	521	180	47.4	4	.21½	+ 2
Dec. 7	142	355	947	520	179	47.8	4	.20½	+ 1
Dec. 14	136	339	928	519	179	49.0	4	.20½	+ 1
Dec. 21	144	348	928	520	179	48.6	4	.21	+ 1
Dec. 28	144	346	927	519	179	48.5	4	.17	+ 1
Jan. 4	155	416	968	516	176	45.9	4	.15½	— 3
Jan. 11	130	377	962	515	176	47.1	3½	.18½	— 1
Jan. 18	117	361	963	515	176	47.7	3½	.17½	

*To notes and deposits. Note—Statement is issued on Thursday.

For it must be borne in mind that the acquisition of this gold by the United States was at a heavy cost; it is not unlikely that 3% (or $3,000,000) was the premium paid thereon, which of course was ultimately taxed upon those who needed the cash. Yet this was only a fraction of the cost of the disturbance, caused in large part by our defective monetary system. In the general result the French people were injured least and possibly actually benefited by the disturbances. It would seem high time that the United States also adopt a system which shall, if not obviate, certainly reduce, the evil effects of such conditions.

The account thus presented shows conclusively how widespread the influence of a money crisis may become. The point to be most fully considered is how each system operated, particularly with respect to the welfare of the several nations affected. It is of record that, anticipating trouble from our abnormally inflated bank liabilities, the Bank of England raised its discount rate to 6% in 1906, thus sounding the warning note. Our own bankers had urged a reform measure upon Congress, which even though defective, should have received prompt attention, but was practically ignored in the legislative halls. As has been stated, some of our bankers gave heed to the warning from London; but neither they, nor the government, could apparently check the operations of the reckless element, and the crash had to come. Subsequent events showed that not only the defective laws, but the inefficient administration of the spirit of the laws which might have proved effective, are to be charged with the disasters.

When the crisis came, our system proved useless to afford prompt relief, adequate to the needs; we turned to London and its system was compelled to yield to our demands at heavy cost to its people, although the Bank of England was able to shift part of the burden upon Germany, which apparently in turn placed some of it upon a few of its less powerful neighbors. (The Bank of Denmark was obliged to raise its discount rate to 8% by reason of the loss of part of its gold reserve.) All of these would have suffered even more had the Bank of France not assisted to the extent that it did; and it should be reiterated that this action was entirely voluntary, and that the French rate rose only to 4%, so that the French people were not seriously embarrassed by the crisis.

OUR PRESENT PROBLEMS

GOVERNMENT ISSUES—BANK ISSUES—INTEREST RATES—EXPERIENCE ELSEWHERE.

It is the consensus of opinion that our coinage system requires no attention at this time, and that efforts should be directed toward the reformation of the paper currency. So far as the government issues are concerned it must be conceded that the legal-tender notes should be retired. If they are continued in use they may again bring disaster as in 1893. They amount to about 350 millions, against which there is a reserve of 150 millions of gold: it would hence require 200 millions more to redeem them all. The occasion is most favorable to borrow this amount at a very low cost; but in fact the Treasury could now spare half that sum from its surplus. The volume of money would not be reduced by the redemption of the first 150 millions, nor by the sum redeemed out of the Treasury surplus, as gold would take the place of the notes; nor would the retirement of the remainder cause contraction, since national banks would take the bonds to issue more notes thereon.

It is not reasonable to suppose that the people will declare themselves favorable to a further issue of legal-tender notes, after the disastrous experiences from 1862 to 1872, and from 1893 to 1897. These experiences cost us many hundreds of millions, part of which we are still paying. Their issue and use are so largely dependent upon the status of the Treasury, and other exigencies political in their character, that there is a continuous danger in employing them as money; their redeemability may be impaired in case of such an exigency. We should not close our eyes to these facts, nor to the further one, that every important nation has rejected the government note system as one pregnant with danger.

The sole argument worthy of consideration favoring the increase of "greenback" issues, or perpetuating the existing one, is that the government should retain control over the money provision. In reply thereto, it should be pointed out that hitherto the *direct* control has always proved disastrous; and until we devise a very radically different system of regulating the value-measure, it will continue to prove disastrous. Yet indirect, efficient control can be attained by means of a central bank. The sincere advocates of the policy of having this power over the general welfare properly exercised by national authority should unite for a government-controlled central bank.

The silver currency should be made absolutely as good as gold. It is unnecessary to adopt the policy of selling the silver and incurring the great loss involved thereby; nor is the proposal to convert the dollars into subsidiary coin

a practicable one, since the supply of silver dollars on hand would last, for this purpose, beyond the life-time of the youngest of our voters; the demand for small silver is distinctly limited and can be increased only by a retirement of $1 and $2 notes, a proceeding which would be needlessly obnoxious to the people. But the dollars and the certificates should be exchangeable for gold: a reserve of 20% would be ample for this purpose; say 110 millions. Moreover, the dollars should be used to be recoined into subsidiary pieces when the latter are needed, instead of buying new silver. The silver certificates will for many years to come be the chief retail money of the people; it is unfair to prohibit them from being *in law* "as good as gold" to everyone; at this time only the holder of greenbacks or gold certificates is authorized by law to demand gold; a clear discrimination, which should cease.

The main contention will be over the bank-note issues. Habit, and the recollection of the old state-bank currency, have unquestionably led the people to regard only a bond-secured currency safe. This is clearly erroneous; and when it is borne in mind that, as shown, the system operates injuriously, the error should be corrected. It is essential to the welfare of the nation that the requisite elasticity of volume be provided for, and this can be fully accomplished only by means of notes issued upon credit. In order to demonstrate the practical utility of this plan, in use by all civilized people, it is probably well that it be tested at first in part, *i. e.,* banks should be permitted to issue only a portion (say 25%) of their notes upon credit, properly secured and regulated.

That these notes would be absolutely safe if secured by a 5% guarantee fund, is demonstrable. Canada has a fund of that proportion, and no note-holder has ever lost a dollar. The notes of our own national banks that have failed, since the system began (1864), amount to 28 millions; the annual average amount of notes outstanding in the period has been 276 millions; had the banks deposited annually only one-fourth of one per cent. of the average note issues, the sum would have been more than sufficient to redeem all the defaulted notes. The notes of failed banks averaged less than $640,000 per year; a 5% fund duly maintained, as proposed, by the banks, would have provided nearly 14 millions. To-day such a fund would be over 30 millions, upon the entire circulation.

Prior to the civil war the New England States, generally, had a well-regu- system, with the Suffolk Bank (referred to *ante*) as the central organ; the reports show that in twenty years, with an average annual circulation of 33 millions, the failures involved only $880,000 of notes, say $44,000 a year; but examination shows that $200,000 of the amount of notes was issued by one bank in Maine, where regulation was least efficient. Upon the whole, however, the record means that a 5% fund there would have been nearly twice as large as the losses, and an annual tax of 1-7 of one per cent. on the notes would have covered them.

We are compelled to deal with this feature because we have the individual bank system, composed of about 20,000 units (all forms of banks); we would not if we could, abrogate this condition; but we should apply the world's experience to the proper regulation thereof; for, as indicated, it is not only the

currency, but banking also, that must be improved. The local banks at whose counters demands for money and credit manifest themselves, should be accorded the power to use their credit within fixed limitations.

The total issues by banks should be limited by the amount of capital; where banks have the required 20% surplus, they should be permitted to issue not to exceed 25% of the whole amount of their circulation upon their credit; such notes to be a paramount lien against all assets and the double liability of shareholders. In addition a fund equal to 5% should be deposited with the Treasury to insure redemption of notes of failing banks, at once; the fund to be reimbursed out of the assets, or by all other banks pro rata to their credit notes, until so reimbursed. In addition, banks should hold reserves against the credit notes in the same ratios as against deposits. Thus secured, no noteholder need ever fear the safety of the notes.

It is, however, essential that the volume of notes be regulated. The capital of all banking institutions is 1690 millions; if all were to become national banks, to avail of the note-issue power, the volume of paper would be inordinately inflated, even after retiring 350 millions of government notes. The aggregate of notes should be limited, at the outset, to approximately 900 millions, or about the present capital of national banks, increasing as population and needs grow. This is likely to be brought about by the continuation of the existing restrictions upon national banks, which do not encourage conversion of state institutions. It is, further, necessary to provide for decrease of notes as well as for the increase. It must, in short, be made profitable to the issue banks to regulate the volume in accordance with demands. To this end a tax upon the notes is proposed.

It is obvious that a tax charge upon currency will inevitably become a tax upon trade and commerce; the bank paying it will recoup itself through the interest exactions. Another feature designed to aid the adaptation of volume to needs is frequent redemption at cost of the bank; for when no demands exist, it is argued, notes coming into banks will be promptly presented for redemption in reserve money, at the bank of issue, or its designated redemption agent, of which there are to be many, under the plan, located at convenient points. This expense, which the issuing bank must pay, together with the tax, will reduce prospective profits from the circulation of the notes, and cause their withdrawal from use, when actual need passes.

Much as the taxation of notes is to be deprecated, there appears no other practicable means of obviating the maintenance of excessive issues by a large number of banks. Yet the tax should not, as is generally proposed, be a fixed one; it is most desirable that, when needs arise, *the notes shall issue;* to this end they should be only lightly taxed at such periods, and heavily when the need has passed, increasing the rate month by month during the period of least demand. This would clearly tend to prevent their use and transmission to the centers. But in order to increase this tendency, the use of the notes for such transmission, except for redemption, should be forbidden. Moreover, these provisions should also apply to bond-secured notes, for they are also issued in excess of

needs; upon the other hand, there should be no limit upon the amount of either class of notes that may be retired during the period of slackened demand, except that credit notes should be retired before bond-secured notes are. Finally, instead of requiring "lawful money" deposits to retire notes, banks should be permitted to deposit each other's notes for such purposes. Banks cannot be expected to return their own notes promptly; the tying up of reserve money is an unnecessary requirement. (This is of course upon the theory that the Treasury is to continue to act as redeeming agent.)

There are still other defects to be corrected. There appears to be quite an agreement upon the suggestion that banks should retain a larger share of their reserves at home in cash, and less in other banks where they almost invariably cause congestion, and where they may become temporarily unavailable; the withdrawal of the sums held in banks frequently causes disturbances. Interior banks should not be permitted to loan money to the speculative markets in the centers. Banks in the centers should not be permitted to pay interest upon "country deposits" in excess of a reasonable amount, to be determined by relation to the reserves of the country banks. *Direct* investments in securities should be limited, say to the amount of the surplus of the banks. Loans upon "underwritings," other banks' shares and inchoate enterprises should be rigidly restricted. Means should be devised by which directors will be induced to perform their duties more efficiently.

But above all, the banking system of the United States lacks solidarity. We have to-day a "banking power" very nearly as large as that of Europe, but it is so scattered, and so illy regulated, that its potentiality is far less. Our gold reserves are too light, because of the defective system, and yet we fail to avail ourselves of their proper power through lack of proper distribution. Hence the erratic fluctuations in interest rates, and the excessive charges upon industry in the sections removed from the center. In our political system we have found that the federalization of the two-score states and the thousands of communities in the land, has proved of inestimable benefit to the people; a similar policy, applied to our currency and banking system, will promote the general welfare in an equal degree; an unprejudiced examination of its operation when we employed it (1791-1811 and 1817-1836), will show that it did so then.

Let us again state what the needs are. An excellent expression thereof, in general terms, is contained in the following paragraph:

"We recognize that interest rates are potent factors in production and business activity, and for the purpose of further equalizing, and further lowering, the rates of interest, we favor such monetary legislation as will enable the *varying needs of the seasons and of all sections,* to be promptly met." This is the promise of the Republican platform in June, 1900; yet nothing was done in that direction. Again, in the report of the Committee on Banking and Currency of the House of Representatives, December, 1906, we find that the kind of currency needed is one that will "lower and equalize rates of interest throughout the United States"; "make the rates practically uniform throughout the year"; and prevent panics.

Obviously to accomplish these desirable results we must have a currency that shall increase and diminish in volume, practically automatically, as the demand therefor increases or diminishes. A note-issue, the volume of which is dependent upon the market-price of bonds, is clearly not at all responsive to the needs, and obviously will not tend to equalize interest rates. Hence it is necessary to provide that at least a part of the bank-note issue shall be so regulated as to avoid a redundancy as well as a deficient supply. This can be done *in no other way* than by authorizing notes to be issued upon commercial and banking credits. Commercial credits, as has been suggested, are indications of demand, and represent actual values in commodities moving; they naturally expand at certain periods and contract during others; the duration of the transaction is generally short, and as each one, after two, three, or four months, *pays itself off,* the bank-notes based thereon are also paid off.

Two further arguments against a note system based only upon bonds should be stated: with a recurring demand for more currency each fall, and with a power of issue not used by the national banks, of fully 300 millions (to the limit of their capital), the notes did not issue because there was no profit in the bond purchases involved; it is decidedly objectionable to maintain a large surplus in the Treasury, and not pay off our debt, merely to keep bonds out to provide banks with the required basis for note-issues. When the debt is not paid the surplus is loaned to banks and we are "out" the interest doubly.

But the reform would be incomplete without the inclusion of the central bank device to regulate not only the currency and the banking features, but our *foreign exchanges* as well. If our equipment is less strong and efficient than those of other nations we cannot hope to win in any international contest.

When we come to study the several existing plans in use abroad, it is proper to see what results have been recorded by each in order to determine which has proved most satisfactory, most beneficial to its people. Reference to the tables in the preceding chapter will show that, judged by uniformity and lowness of interest rates, the Bank of France is superior to all others in its service to the business interests of the people for whom it was created. This is not merely a temporary incident. Covering a period of six years, France enjoyed a uniform fixed 3% money rate, increased early in 1907 to 3½% only by reason of disturbances here. Germany in the same period shows a change from an annual average of 4.1% to 3.32, upward to 4.22, a recession to 3.81% and another reaction to 5%; a mean rate of 4.05%. England's annual average rate fluctuated between 3% and 4.27% with a mean rate of 3.56%. Austria's showed a variation between 3.50% and 4.35% average, with a mean rate of about 3.78%. In each case the figures represent the charges in the whole country.

Compare these relatively equable rates with the wild gyrations shown in our own country, where call loans ranged in that period from ½% to 125%, and commercial loans from 2½% to 10%; when interior points show rates as high as 8% steadily in most reserve centers, and range between that figure and 15% in the smaller communities; and the measure of the needless burden under which our trade and industry operate can be approximated. This is all due to

defects in our system which intelligent and courageous legislation could correct. Since we are supposed to be a self-governing nation, the responsibility for the omission to correct the evils rests upon us—the people. We are paying more tribute than we need pay because we appear indifferent to those defects; so long as we refuse to adopt serviceable instruments wherewith to conduct our business, we must expect to suffer the penalty.

We cannot expect 3% money; conditions here are different from those in the fully settled countries of Europe; but we may look for a more equable and more equitable rate throughout the land and throughout the year, if we adopt an efficient system. Stable money is the greatest boon that can be conferred upon legitimate trade and industry; unstable money is the chief reliance of illegitimate business. The legitimate business interests of the nation are entitled to a system which shall furnish stable money as *a right,* not a favor; proper speculative business also deserves consideration, but secondarily; our system has unduly favored the improper speculative operations.

Were it a question of introducing an entirely new system, instead of replacing an old one with its numerous ramifications, there can be little doubt that the Canadian would be superior to all others for our purposes; but since that system would require a change presenting innumerable difficulties, we may well shrink from the attempt to carry it into execution. This does not, however, stand in the way of our adopting, and adapting to our use, those features which can be made valuable; looking to other systems, such as those of France and Germany, for example, to furnish us with the other requisites.

A limited credit-note issue for our local banks, and a federation of these under a central institution, with practically unlimited, but thoroughly regulated, power to issue additional currency when needed, would be such an adaptation of the best in other systems to improve our own, as would prove most serviceable in the existing circumstances. This appears to be the lesson, which the examination of foreign experiences as outlined in this and other chapters, should teach us.

The channel through which a central bank can most efficiently operate to provide an ample supply of money is the rediscounting function; by the issue of its notes to other banks upon their transfer to it of commercial paper. This mode of utilizing means, employed so extensively in banking abroad, is almost unknown here. Our national banks, for example, show only 6 to 15 millions of rediscounts in the course of a year; or if we add the liability for bills payable, a similar transaction, the sums range from 27 to 59 millions; out of a total of loans and discounts of over 4500 millions. The Bank of France does an enormous business in rediscounting, embracing bills of tradespeople as low as 5 francs; nearly one-half of the commercial paper so taken is in pieces of 100 francs ($19.30), or less. The great benefit to the *people* is thus made apparent.

The issue of clearing-house certificates is analogous to the rediscount system; but it is resorted to only in cases of dire emergency.

To accomplish this purpose with the greatest resulting benefit, the note-issues of a central bank should not be taxed, since taxation only increases the

cost to the public of obtaining additional money means. Yet it is proper to consider the distinction between legitimate business demands for additional currency and credit facilities, and demands arising from purely speculative operations. The central bank's note-issues should be so regulated as to draw the line sharply between these two classes of demands. But this may be safely left to the management, guarded by general provisions.

For it is obvious that the institution should be an instrumentality to promote the *general welfare,* which local banks cannot be expected to do. By limiting the amount of dividends to be paid upon its shares, which is an entirely reasonable proposition, there would be no incentive to increase profits at the expense of the national welfare; by limiting the rate of interest which it may exact (say to 6%), the chief purpose of its creation,—maintenance of stability,—is largely promoted.

Under properly devised regulation of the currency by the central bank, the need of taxing the notes of local banks might be entirely obviated. This would clearly be an enormous advantage, and it would constitute one of the chief arguments in favor of the establishment of that system. It does not appear practicable to eliminate this taxing feature in any other manner.

The central bank should hold the government deposits, to be utilized for the accomplishment of the ends in view. It should be required to perform such duties as the government's business may impose, including transfers of funds from one place to another, free of charge. In short, it should replace the sub-treasuries, by means of numerous branches. At present there are but nine sub-treasuries; so far as these are of use to the public, the limitation in number operates as a distinct discrimination against many localities; the great and growing region between St. Louis and San Francisco has none; nor is there any such establishment south of Washington until New Orleans is reached. It is sometimes urged that each state should have a branch of a central bank if established; it is probable, however, that a division of the country into about twenty-five districts, governed by commercial rather than by state lines, with one establishment in each, would suffice.

Finally, it is essential that the government exercise indirect control over the central bank; it should have a large interest in the stock and a fixed number of the directors should be appointed by the government, as well as the governor and deputy governor thereof. Yet these positions should be so created, as to tenure, that no political considerations shall prevail; this can be readily devised. The supreme confidence of the whole people in the national government would tend to remove most of the prejudice presumed to exist against the plan. Let it be known that the institution is one of the instrumentalities of the national government, under its supervision, to promote the general welfare, to establish and maintain justice with respect to the value-measure and to regulate financial affairs, and the prejudice will disappear.

CURRENCY REFORM MEASURES

ABSTRACTS OF PROPOSED PLANS—BANKERS' PLAN—FOWLER BILL—ALDRICH BILL—CENTRAL BANK BILLS.

The question of improving the paper currency system of the United States became quite as prominent, for a time after the panic of 1893, as that relating to silver; but the latter was regarded of paramount importance and received first attention.

In the period between the panic and the legislation of 1900, the propositions respecting notes were, briefly, as follows:

Government Notes. 1. Increase the volume, purely on the nation's credit, to 500 or 1000 millions.

2. Increase issues at the ratio of 2 for 1 of gold in the Treasury.

3. Provide inter-convertible bond notes; *anyone* having United States bonds to be authorized to obtain notes, the bonds to bear no interest while the notes are out.

4. Issue government notes to any bank upon deposit of United State, state or municipal bonds, subject to 4% tax; establish a 40% gold reserve against notes by sales of new bonds.

5. Retire all government notes by means of a bond issue.

6. Repeal all legal-tender laws.

7. Prohibit reissue of notes redeemed in gold except in exchange for gold; separate note-issue functions of government from other functions. (By the author hereof.)

Bank Notes. 1. Retire all bank notes and substitute government notes.

2. Cancel bonds on deposit to secure notes, and have the government assume the liability for the bank-notes, to be redeemable in gold or silver at its option.

3. Permit state banks, as well as national ones, to issue notes, provided states pass laws in harmony with national laws; security to include state or city bonds *and 20% coin.*

4. Permit national *and state* banks to issue notes, provided states enact laws to protect noteholders; limit issue to 75% of capital; security, 30% of issues in government notes (instead of 90% bonds); banks to create, and mutually maintain, a 5% guaranty fund to redeem notes of failed banks.

5. Permit note-issues without security deposit, but with 25% cash reserves, taxed 2%; banks to provide a guaranty fund; no notes under $10; issue only to 75% of capital.

6. (American Bankers' Association, Baltimore, 1894.) Permit national banks to issue notes without bond security, but a first lien upon assets, and protected by a 5% guaranty fund; issue limited to 50% of capital ordinarily, subject to ½% tax, but extraordinary issues of 25% more, subject to higher tax. (The first concrete plan for credit notes.)

7. Increase right to issue notes to par of bond security instead of 90%, and repeal limit of retirement and reissue of notes as per law of 1882.

8. Repeal 10% tax upon state bank notes, so as to permit them to emit notes.

9. Gradually diminish bond-security requirement until all notes are based on credit.

General. 1. (Indianapolis Convention, 1897.) Increase gold reserve against government notes to 25%; establish 5% gold reserve against silver dollars and certificates; gradual retirement of government notes; authorize national banks to issue notes upon a 25% bond-security, the latter to be abrogated entirely after 10 years; notes to be first lien upon assets and protected by a 5% guaranty fund. Notes issued over 60% and up to 80% of capital, to be taxed 2% per annum; over 80% at 6%. Authorize national banks with $25,000 capital, and permit national banks to establish branches.

2. Establish a central bank of issue, similar to the former Bank of the United States, to take the place of sub-treasuries, and regulate other banks' issues. (This was proposed by the author hereof, but found little favor.)

Legislation. The act of 1900 increased the gold reserve against government notes to $150,000,000, and provided for 3% bond issues to replenish it if depleted; the issue business of the Treasury was separated from its other functions, and the redeemed notes were to be reissued only for gold. National banks with $25,000 capital, in small places, were permitted; notes authorized to par of bonds; limit of reissue (law of 1882) of notes retired, abrogated. A bond issue at 2% authorized, to be issued in exchange for old bonds, at an agreed valuation; banks taking out notes on new bonds to pay only ½% annual tax. (The refunding created a fictitious government credit.)

1900 to 1906. Most of the formerly proposed plans were reproduced, but there was a more distinct trend toward taxed credit notes for banks.

1. Emergency notes, issuable only upon occasions of need, to be taxed 5%.

2. (New York Chamber of Commerce plan.) Create a central bank to supplement present note-issues with credit-notes; abolish sub-treasuries; bank to do business only for government and banks and in foreign exchange; or: Permit national banks having 50% of capital in bond-secured notes to issue credit-notes to 35% more, taxable graduatingly, according to amount taken out, from 2% to 6%; the tax to constitute a guaranty fund; establish redemption agencies throughout the country to insure prompt withdrawal of notes when not needed; repeal law limiting retirement of notes; deposit all government money above a fair working balance in the banks; future bond issues not to be available for note-issues.

3. (American Bankers' Association, 1906.) Permit national banks having

bond-secured notes to 62½% of capital, to issue 25% more *on credit,* subject to 2½% tax and a further 12½% subject to 5% tax; the ratio of bond-secured notes to diminish as public debt is reduced; notes to be a first lien upon assets; establish a 5% guaranty fund to redeem notes of failed banks; banks to hold same reserve against credit notes as against deposits; create numerous redemption points to insure prompt current redemption of notes; repeal limit of retirement of bond-secured notes; government money in excess of fair working balance to be deposited in banks, not to exceed 50% of capital, without bond security, but to pay 2% interest. (Substantially embodied in Fowler bill of 1906.)

Legislation. The limit upon retirement of notes increased from $3,000,000 to $9,000,000 monthly; deposits of government money *from any source,* in banks permitted. (Act of 1907.)

Propositions after the Panic of 1907. 1. Require national banks to create an insurance of deposits fund, by paying annually into the Treasury a tax upon their average deposits (rated at from ¼% to $^1/_{80}$% in the different bills.)

2. Require national banks outside of reserve cities to hold larger *cash* reserves; ranging from 2/3 of the required total to *all.*

3. Require national banks to pay interest on public deposits (from 2% to 6%, according to seasons.)

4. Permit state, municipal and railway bonds to be used to secure note-issues.

5. Provide $500,000,000 of government notes, issuable to banks upon deposits of bonds, 95% on United States bonds, 75% upon state or other issues, subject to tax of 5% if based on United States bonds and 7% if on others; interest on bonds to go to banks, and bonds returnable on deposit of any form of money equal to the amount taken out. If price of bonds falls, discrepancy to be made good, or bonds sold.

6. (Fowler bill of 1908.) Permit national banks to issue notes to amount of capital without bond-security, to be a first lien on assets, protected by a 5% guaranty fund in Treasury and reserves at ratio now required for deposits, but a larger part to be in cash; notes to be taxed 2% per annum, to be receivable for all public dues and for all payments except interest on public debt; not to be held in reserves, under a penalty of 10% *per day* on amount so held; but money in 5% fund may be counted as reserve. Divide country into numerous redemption districts, banks in each to choose a board of managers to direct, under Treasury supervision, the issue and redemption of notes; the board to meet at least monthly, to consider conditions in district; to have a chairman who is to be a deputy comptroller of the currency. The board may authorize issues of notes in excess of capital in emergency. Notes to be redeemable at an agency in each district. Banks to establish a 5% fund to insure deposits; losses to be paid $^1/_{10}$ by the district in which failing bank is located, $^9/_{10}$ by others, pro rata. The 2% tax to go into a general fund and with the two

5% funds to be invested by the Treasury in United States bonds to be bought from the banks, up to 80% of combined fund; when the tax fund exceeds $25,000,000, surplus to go into government's gold reserve against greenbacks, and when this reaches amount of greenbacks out, these notes to become gold certificates; but when a bank liquidates voluntarily it is to have its share in the 5% fund returned to it if it has paid all its debts and pro rata for failed bank losses. Government funds to be deposited in banks entirely, not to exceed 50% of the capital of each; and without bond security if insurance fund is complete; but to bear interest at 2%. Government to apply up to $200,000,000 of its balance to buy back bonds held by banks which are not bought by guaranty fund, and hold them to be used to invest the money afterward coming to the fund. No bank shall pay out *bond-secured* notes, but must send them in for redemption; and banks must provide for such redemption of all their bond-secured notes before receiving credit-notes. (Accomplished in large part by the purchase of their bonds as above.) No bank to pay more than 2% on commercial deposits; but may take *savings* deposits in separate department, and such as have $100,000 capital or more, may exercise trust company functions.

7. (Aldrich bill.) The Treasury to provide, ready for issue in case of need, $500,000,000 of national bank notes of the several banks, to be issuable upon their depositing state, municipal or railway bonds, approved by the Treasury, which shall also determine that *the need exists;* only banks having at least 50% of capital in bond-secured notes may participate, and the total issue may never exceed the capital. The ratio of issue to be 90% on state or municipal and 75% on railway bonds; if market value falls, difference to be made good. The additional notes to be taxed at rate of 6% per annum (½% monthly), but may be retired at any time with approval of Treasury. In addition to usual promise of banks to pay, the notes are to have pledge of government to redeem them in case of failure of bank. (At first this bill also proposed increasing *cash* reserves of country national banks.)

8. Appoint a currency commission to study subject and report a comprehensive plan by January 1, 1909.

9. Permit national banks to issue notes on credit with 5% guaranty fund, to the extent of half the bond-secured circulation taken out, but not to exceed 20% of capital; such notes to be first lien upon assets and pay ½% tax annually. No limit upon the retirement of such notes. Proportion of issue to be increased after four years to 40% of capital with approval of the Treasury.

10. Permit a similar issue to the extent of 50% of capital, provided as much is in bond-secured notes; tax graduated from 2½ to 4½% *semi-annually.*

11. Authorize a central bank with capital of $100,000,000, of which the government is to take ⅗, selling bonds to pay therefor; the remainder to be taken by national banks in proportion to their capital and surplus; charter to be for fifty years and renewable; ten branches; twenty-five directors, twenty-two of whom to be elected by shareholders, from the several branch districts and not all to belong to the same political party; terms to be for six years, but arranged so as to change in groups; the Secretary of the Treasury, the Comp-

troller of the Currency and the Treasurer of the United States to be *ex-officio* directors, the first-named chairman, the other two vice-chairmen; they shall also be members of the executive committee, to consist of not less than seven; board to meet at least quarterly; to choose officers and managers and fix discount rates. Underwriting or syndicate loans prohibited. Power to issue $100,000,000 credit notes on its capital; *any* bank with surplus equal to 25% of its capital may borrow these notes, but not longer than for one year, upon approval of the Bank, paying ⅛% tax and 4% per annum interest, and depositing approved (savings bank) bonds as security on basis of 90% of par value. (Market value to be not less than par.) Further note-issues to be allowed up to $400,000,000, issuable only on vote of twenty directors; and the additional issues to be loaned only to 50% of capital of borrowing bank, and pay the same tax, but interest to be graduated from 6 to 10%. The Bank may rediscount paper for other banks, not longer than three months, if paper is indorsed by bank and proper security given; may advance money to and receive deposits from, the government; and shall not pay more than 4% in dividends, any surplus to go into a gold fund ultimately to belong to the United States. Head office to be in New York, branches in chief cities, all subject to government inspection.

NOTE.—Savings bank bonds as here used, signifies such bonds as the states where savings banks are regulated most efficiently permit those banks to invest in.

12. Establish a central bank with a capital equal to 10% of the capital of all the national banks, the shares to be non-negotiable; to be taken by said banks; charter to be for fifty years; twenty-one directors, of whom seventeen to be chosen by shareholders, the four others to be the Secretary of the Treasury, the Comptroller of Currency, the Treasurer of the United States and the Director of the Mint, *ex-officio*. The directors to appoint officers. Directors to be apportioned by districts and have terms of six years. May issue up to $300,000,000 of credit notes, secured by bonds or bills receivable in bank; in emergencies may issue more notes on deposit of gold, to the amount thereof, with the Treasury, subject to ⅛% annual tax. May loan on high-grade bonds to 40% of their market value and upon grain or cotton in warehouses up to 60% of the market value; may rediscount for banks and lend them money on securities, but never on real estate, or mortgages, or bank shares. No paper discounted to have more than 120 days to run. To keep 40% in gold against deposits; to pay no interest on deposits except those of the government, the rate for which to be agreed upon. Dividends of 4% permitted; then up to 2% of profits to go to surplus; any further profits to be divided equally between government and shareholders. Branches to be established subject to the approval of the Treasury, which shall also provide for periodical examinations and reports. Directors to meet at least monthly; neither they nor any officer or employee, shall participate in any syndicates or underwritings, nor borrow from the bank. Head offices to be in Chicago; notes to be redeemable at head or any branch office, in "lawful money." Stock may be held as part of reserve of any national bank.

13. Provide an issue of government notes obtainable by banks at the subtreasuries upon depositing state or municipal bonds; the notes so loaned to be subject to a tax graduated according to the time they are out ⅛% to 1% *per month;* any form of money may be deposited to retire notes and release bonds at option of bank; all banks and trust companies may avail themselves of the right to borrow notes by accepting terms of the law; reserve banks to hold all reserves at home, 50% in gold; other 50% may be in bonds to be used to borrow notes. Limit aggregate loans of national banks to seven times the capital and surplus; tax banks 1/16% of deposits to insure the depositors; prohibit loans for the purpose of "stock-gambling."

Government moneys to be deposited in *any* banks, duly secured by bonds, to bear not less than 2% interest; but banks bidding highest interest rate preferred.

14. Provide $200,000,000 Government notes, to be loaned to owners of cotton (one bale or upward deposited in government depositories to be established), at 75% of its value, for not longer than six months; the loan to be repayable in any form of money, and if not repaid within the term, the cotton to be sold by the Treasury.

15. Prepare $500,000,000 of United States notes and create an emergency currency fund; loan these notes through a commission of twelve men, appointed by the President, to national or state banks, in case of stringency, for not longer than one year, at progressively increasing interest rates, from 4% to 6%; the loans to be secured by the deposits of such bonds as the commission may determine, the amounts rated according to the character of the bonds.

16. Prepare $1,000,000,000 United States notes; $600,000,000 thereof to be loaned to *any* bank (but never in excess of 60% of its capital and surplus) upon a first-lien collateral note secured by bonds acceptable to the Treasury; interest to be at 2% per annum for eight months, then 2% per month; the remaining $400,000,000 to be similarly loaned, *in emergencies* only, at 6%, but never for a longer period than six months. Four per cent. of the notes to be retired and destroyed annually. The interest received upon the loans to become part of the fund and similarly loaned at 2%; and the Treasury surplus to be loanable to any bank, subject to the same security, and to bear 2% interest.

17. National banks having 50% of capital in bond-secured notes, to be permitted to issue further notes secured by warehouse certificates for cotton (1,000 bales or more), to the amount of one-half the market value of the cotton; the notes to be taxed ¼% monthly, and to be retired within one year by deposits of any form of money with the Treasury; in case of default the cotton certificates to be sold; the volume of the notes to be limited to $300,000,000, and the need for their issue determined by the Treasury.

18. Provides that certificates of any clearing-house association located in a national-bank reserve city (in operation for five years, the bank members of which have capital, surplus and profits over $5,000,000, and clearings over $150,000,000), may be accepted by the Treasury as security for national bank-note issues at 90%, such issues to be in addition to the bond-secured notes,

but not to exceed the capital of the bank applying therefor, and to be subject to a 2½% annual tax. The clearing-houses to be required to hold against the certificates the obligation of the bank secured by collaterals, including warehouse receipts, negotiable paper, securities, duly approved, taken at not more than 80% of market value; the certificates to bear interest not to exceed the legal rate, to be the absolute obligation of the clearing-house; which may assess any losses thereon against the borrowing banks pro rata, and must retire the certificates in gold within one year.

19. Provides that clearing-houses be incorporated under national law and under Treasury supervision, hold security for note-issues of banks, and act as redeeming agents for such banks. Notes to be secured by "commercial assets" deposited with the clearing-houses (negotiable paper and securities), taken at 75% of value; and redemption provided for out of 5% fund, ultimate redemption guaranteed by all the banks associated.

At the present writing the outlook for reform legislation is not encouraging; the divergence of views as indicated by the foregoing exhibit of plans, rendered it impossible to secure a majority of Congress to agree to any one plan.

The chief and radical difference is upon the question whether the paper currency shall be issued by the *government* or by the *banks,* the division of opinion being practically upon political party lines. Those favoring *bank* issues are again divided into factions, (*a*) those advocating a central bank; (*b*) those standing out for bond-secured notes; (*c*) those advocating currency based upon assets; (*d*) those desiring to provide only for emergency issues; (*e*) those who wish the entire subject referred to a commission of experts for thorough study and comprehensive reform.

The last-mentioned measure is likely to be adopted, in a modified form, confining the membership of the commission to senators and representatives. This is not calculated to inspire confidence in results; for Congress has been at liberty to provide remedial legislation at any time in the past eight years and failed to do so. Political exigency has apparently dictated this inaction; and if we are to judge by the history of the past, this will occur again, unless the people give voice to a demand for reform.

The nation should not continue to be satisfied with patchwork, such as Congress has given it periodically; for so long as we have merely patching we shall have all the evils of an inefficient system; under which it will be impossible for the United States to attain front rank among financial powers although entitled thereto by the wealth of the nation.

The continuance of the present conditions is a reflection upon our national intelligence, which gives foreigners much and good reason to ridicule our pretensions of superior sagacity. While we have the greatest natural resources and the most energetic population to develop them, we are as a nation deprived of a very large part of the reward due us through the indifference we show to the neglect of our lawmakers.

It must be evident to all who stop to consider the subject that a currency which causes unstable conditions, such as have been discussed herein, is not an equitable value-measure; and that a value-measure that is not equitable is as vicious in its effect upon the interests and welfare of the mass of the people as a dishonest weight-measure; it is only because the vicious operations of the former are less obvious than those of the latter that it is tolerated. Yet so long as the people are indifferent, their lawmakers will not move to correct the evil. This is shown by their complete forgetfulness, during the intervening eight years, of the promise made in 1900, quoted on a previous page (201).

Postscript

The Vreeland-Aldrich bill as passed May 30, 1908, provides:

National banks having 20 per cent. surplus, not less than ten in number, in contiguous territory, with total capital and surplus not less than $5,000,000, may incorporate as National Currency Associations, and at the discretion of the Treasury may receive from the members and hold in trust securities and commercial paper, upon which those banks which have at least 40 per cent. of their capital in bond-secured notes may receive for issue additional notes to 75 per cent. of the cash value of the securities, etc., the notes to be a liability of the banks of the associations;

Or (and) such national banks may deposit with the Treasurer of the United States, or a sub-treasurer, State or approved county and municipal bonds and receive such notes to 90 per cent. of the market value (not in excess of par) of such bonds.

These notes to be redeemable as other banknotes are and to have a 5 per cent. redemption fund in the Treasury; *all* banknotes to bear on their face the statement that they are secured by "U. S. bonds and other securities" as soon as plates can be changed. Total issue of all kinds of notes by any bank not to exceed capital and surplus, and not more than 30 per cent. thereof on commercial paper; aggregate additional issue for the country, $500,000,000, distributable according to capital and surplus of national banks. Notes to be taxed 5 per cent. first month, adding 1 per cent. monthly thereafter until maximum of 10 per cent. Notes retirable without limit by deposits of lawful money or banknotes, to be held in Treasury for that purpose.

Banks holding special deposits of public money to pay interest as Treasury may fix, not less than 1 per cent. per annum; no reserves to be required against such deposits. A Currency Commission of nine Senators and nine Representatives created to work out reform plan. This act expires June 30, 1914.

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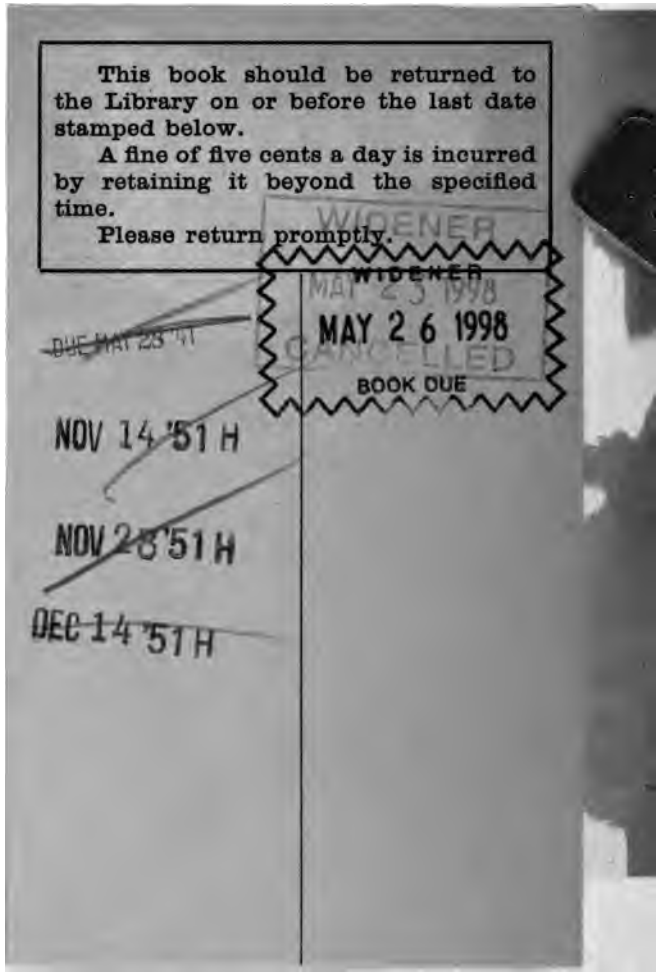
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